

09580601.052600

FIG. 1

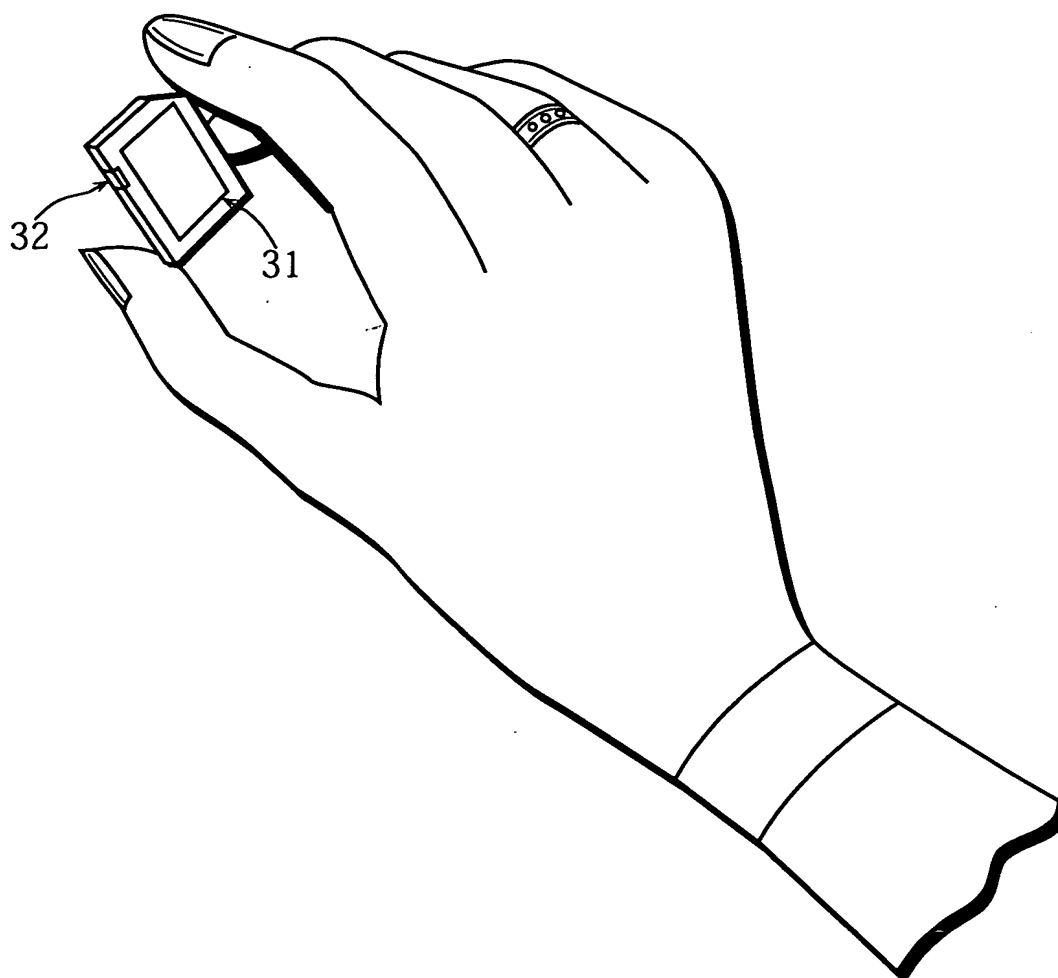


FIG. 2

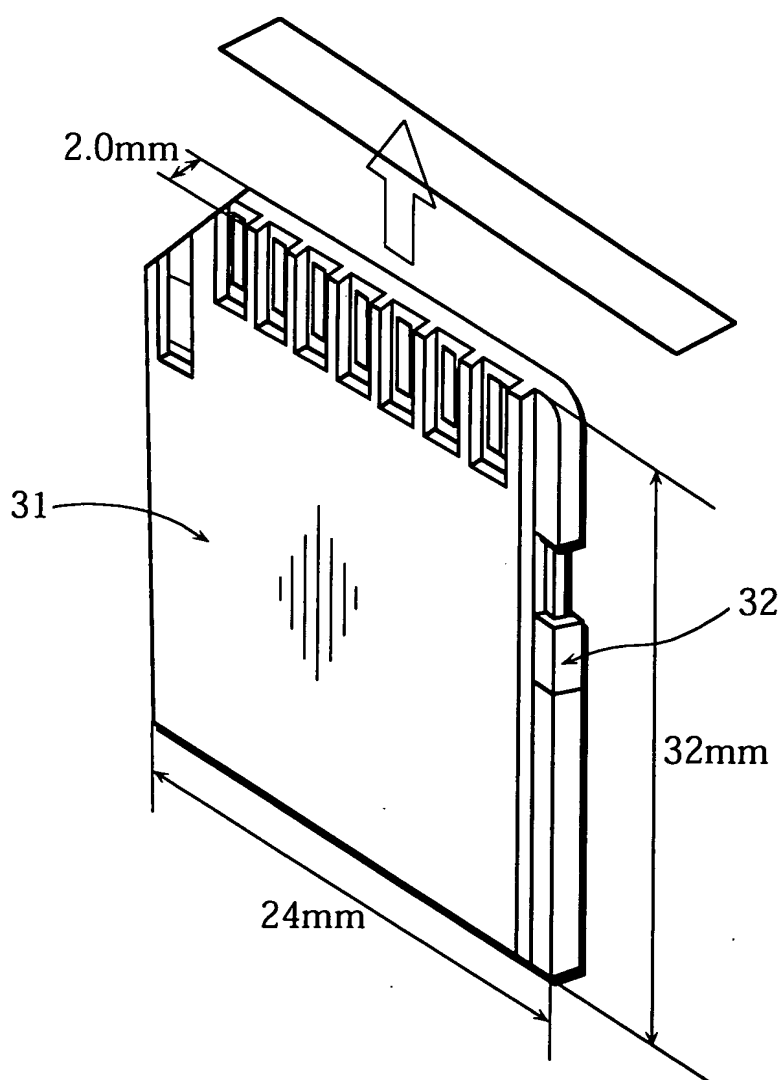


FIG. 3

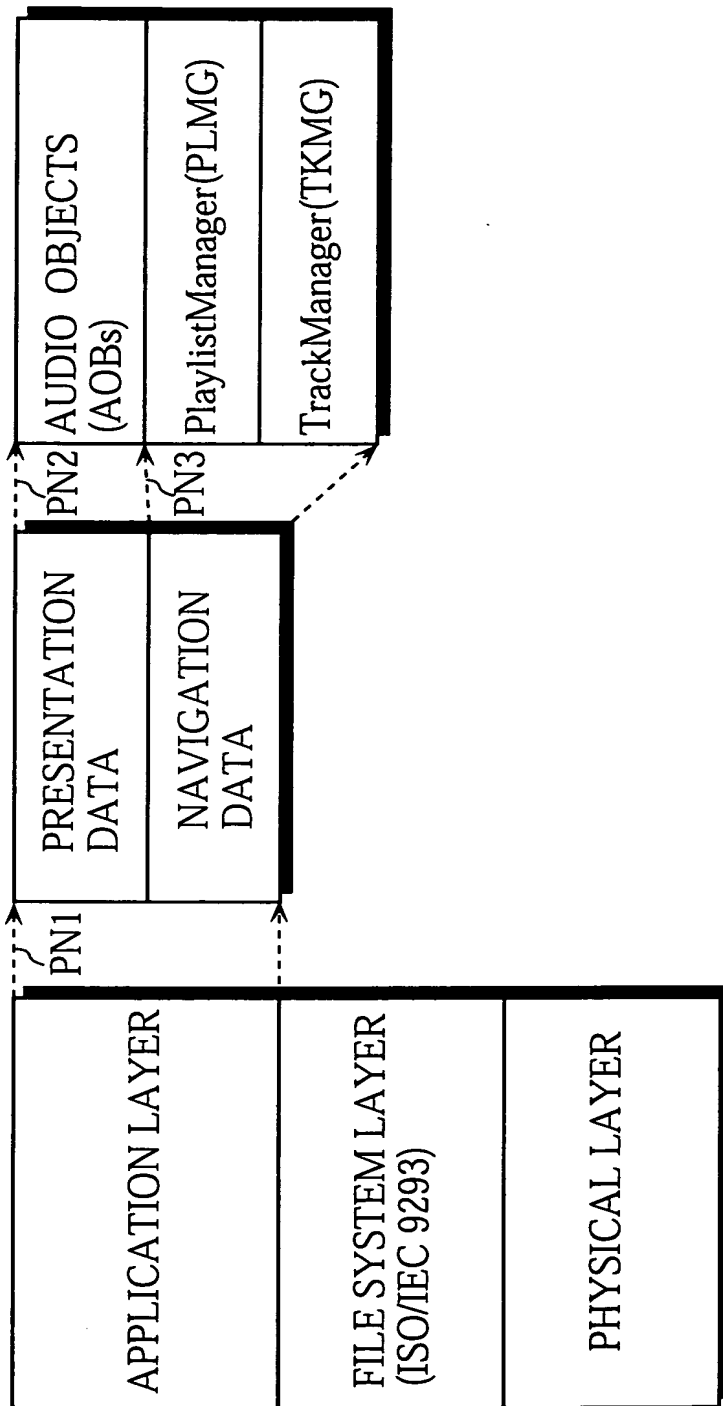


FIG. 4A

PHYSICAL LAYER

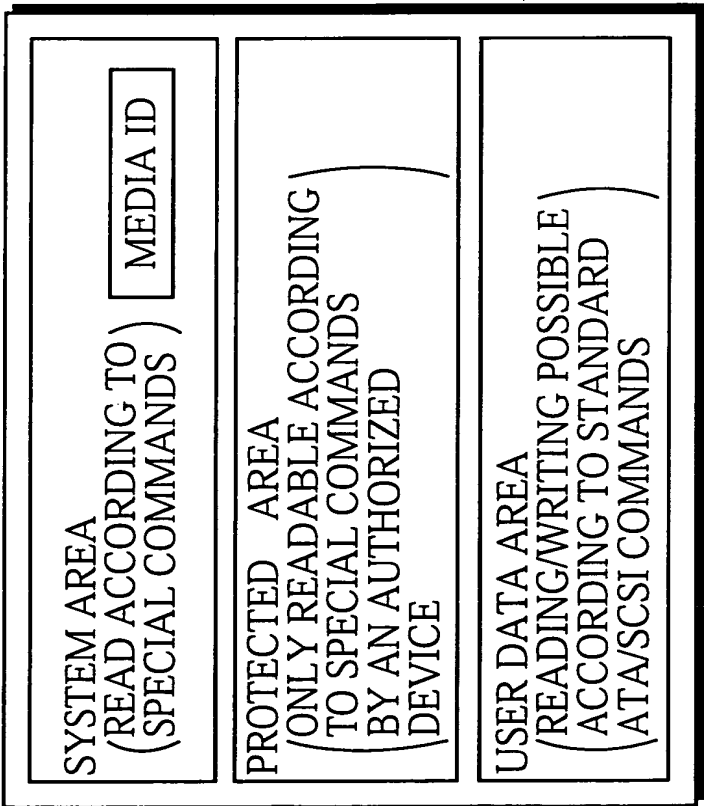
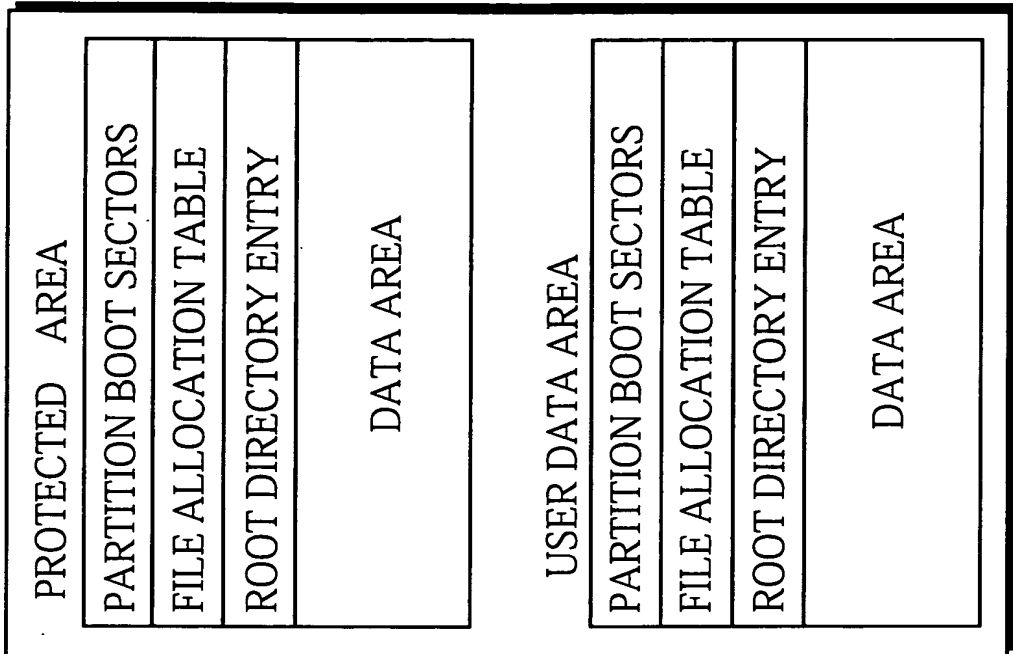


FIG. 4B FILE SYSTEM LAYER
(ISO/IEC 9293)



USER DATA AREA

FIG. 5

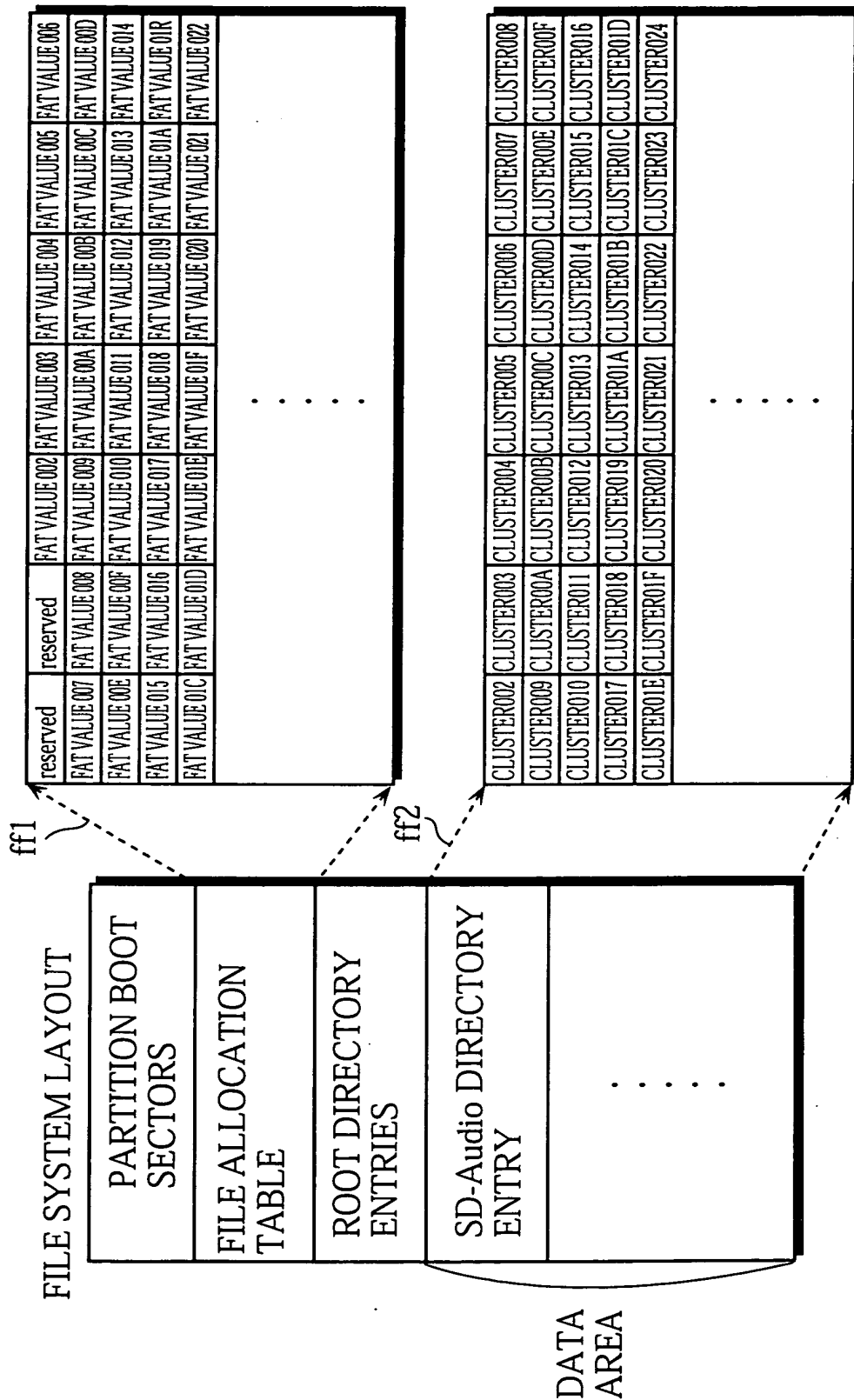
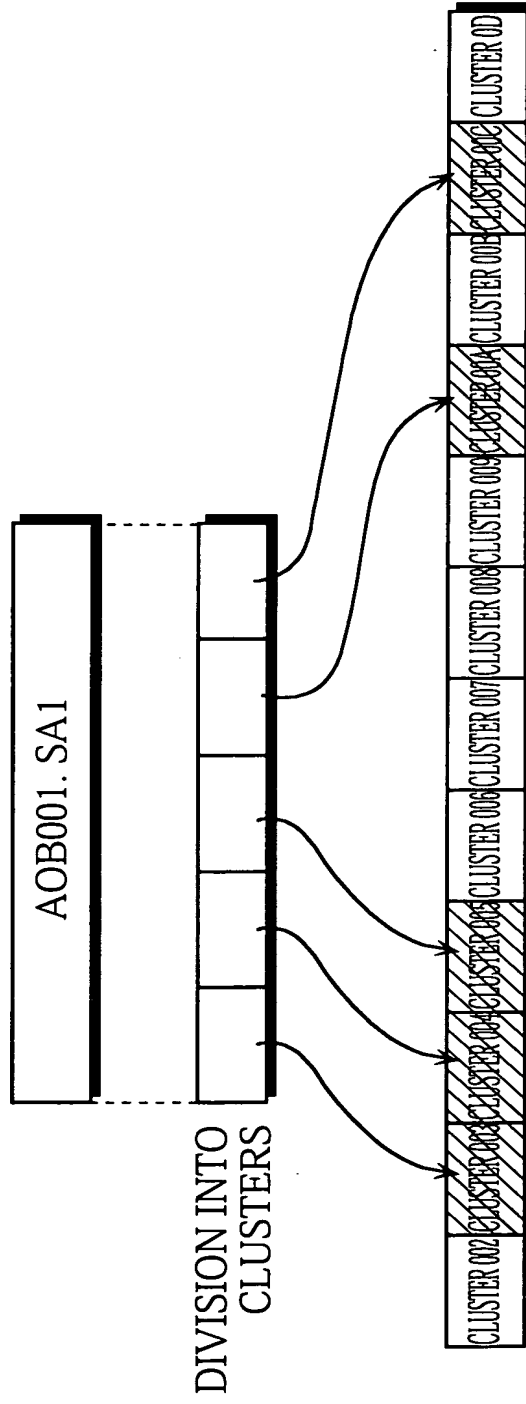


FIG. 6



SD-Audio DIRECTORY ENTRY

FIG. 7

FILE NAME	FILENAME EXTENSION	NUMBER OF FIRST CLUSTER IN FILE
AOB001	SA1	003

fk1

FAT VALUE 002-006

fk3

fk2

reserved	FAT VALUE 002(007)	FAT VALUE 003(004)	FAT VALUE 004(005)	FAT VALUE 005(00A)	FAT VALUE 006
----------	--------------------	--------------------	--------------------	--------------------	---------------

CLUSTER 002-006

①

②

③

fk4

CLUSTER 002	CLUSTER 003	CLUSTER 004	CLUSTER 005	CLUSTER 006
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fk5

FAT VALUE 007-00D

FAT VALUE 007	FAT VALUE 008	FAT VALUE 009	FAT VALUE 00A(00C)	FAT VALUE 00B	FAT VALUE 00C(FFF)	FAT VALUE 00D
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CLUSTER 007-00D

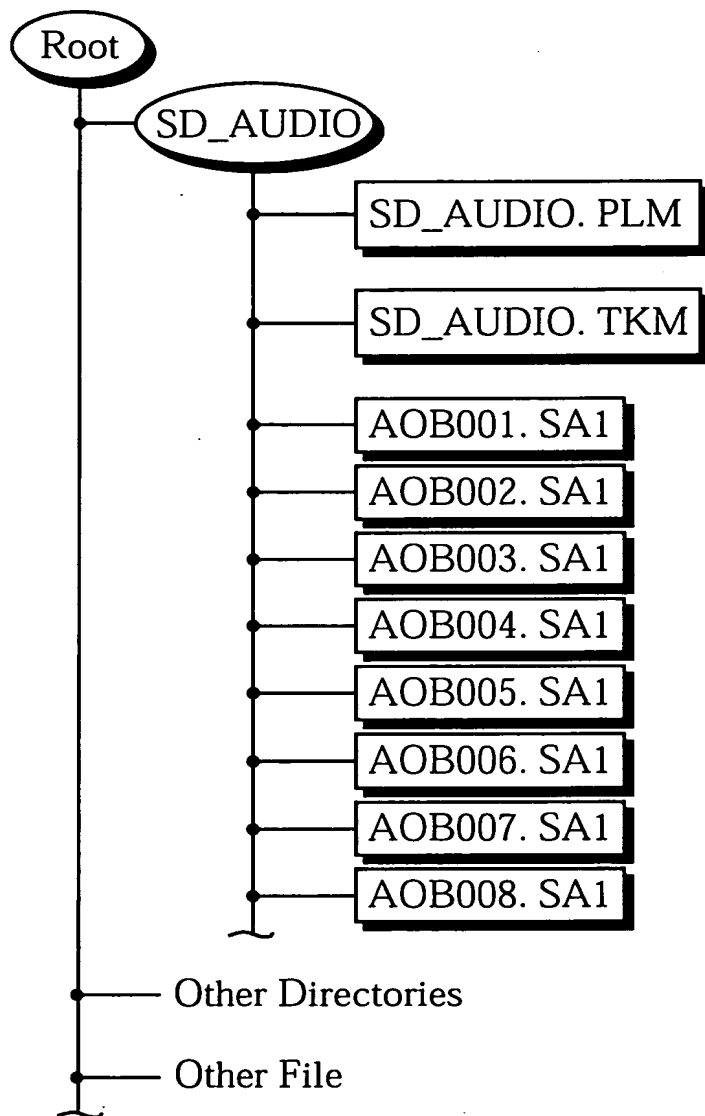
④

⑤

CLUSTER 007	CLUSTER 008	CLUSTER 009	CLUSTER 00A	CLUSTER 00B	CLUSTER 00C	CLUSTER 00D
-------------	-------------	-------------	-------------	-------------	-------------	-------------

USER DATA AREA

FIG. 8A



PROTECTED AREA

FIG. 8B

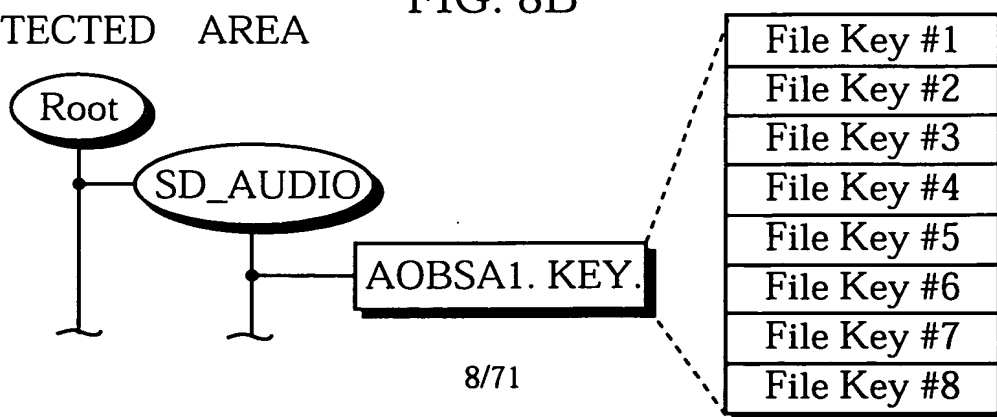


FIG. 9

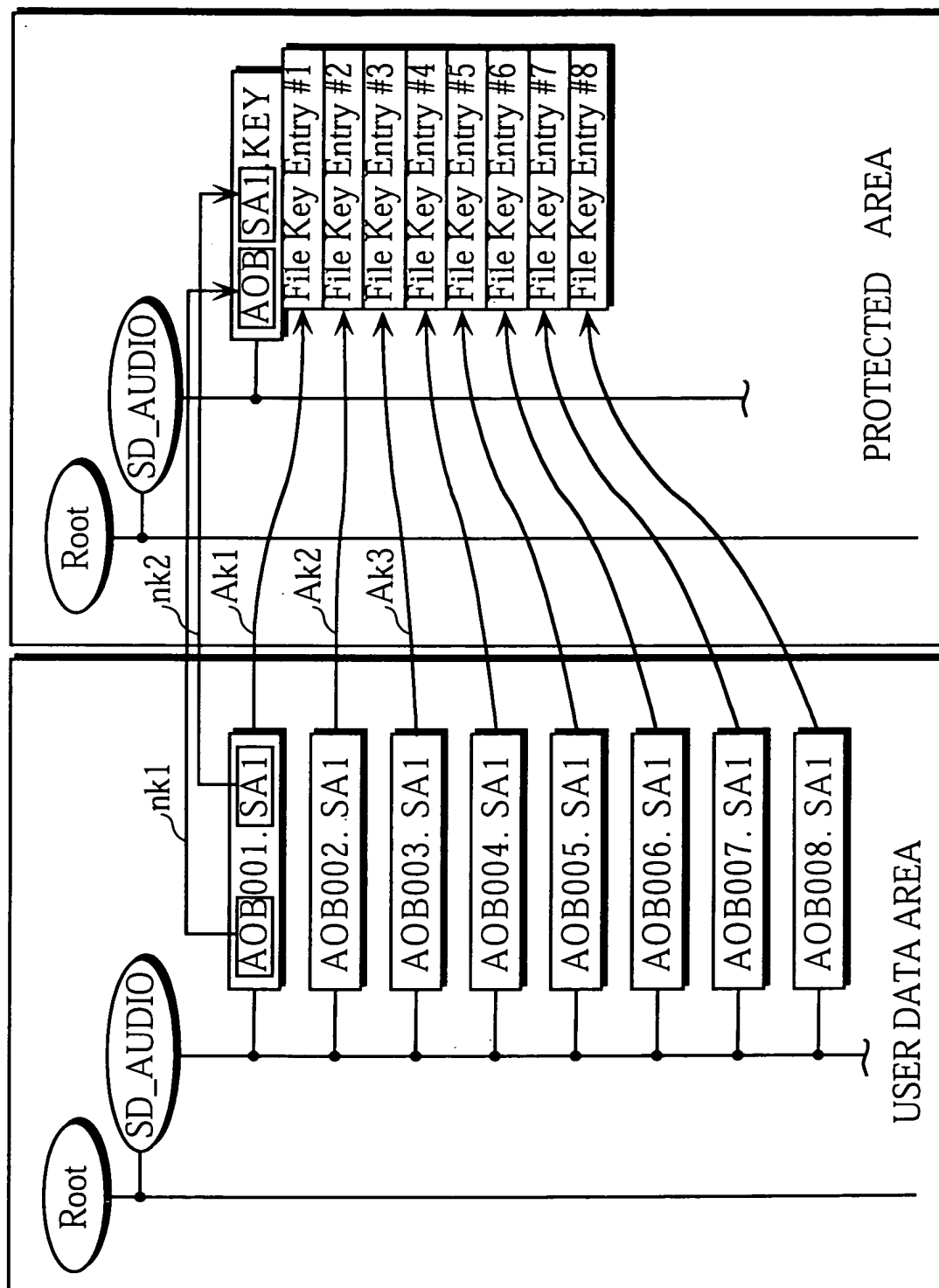


FIG. 10

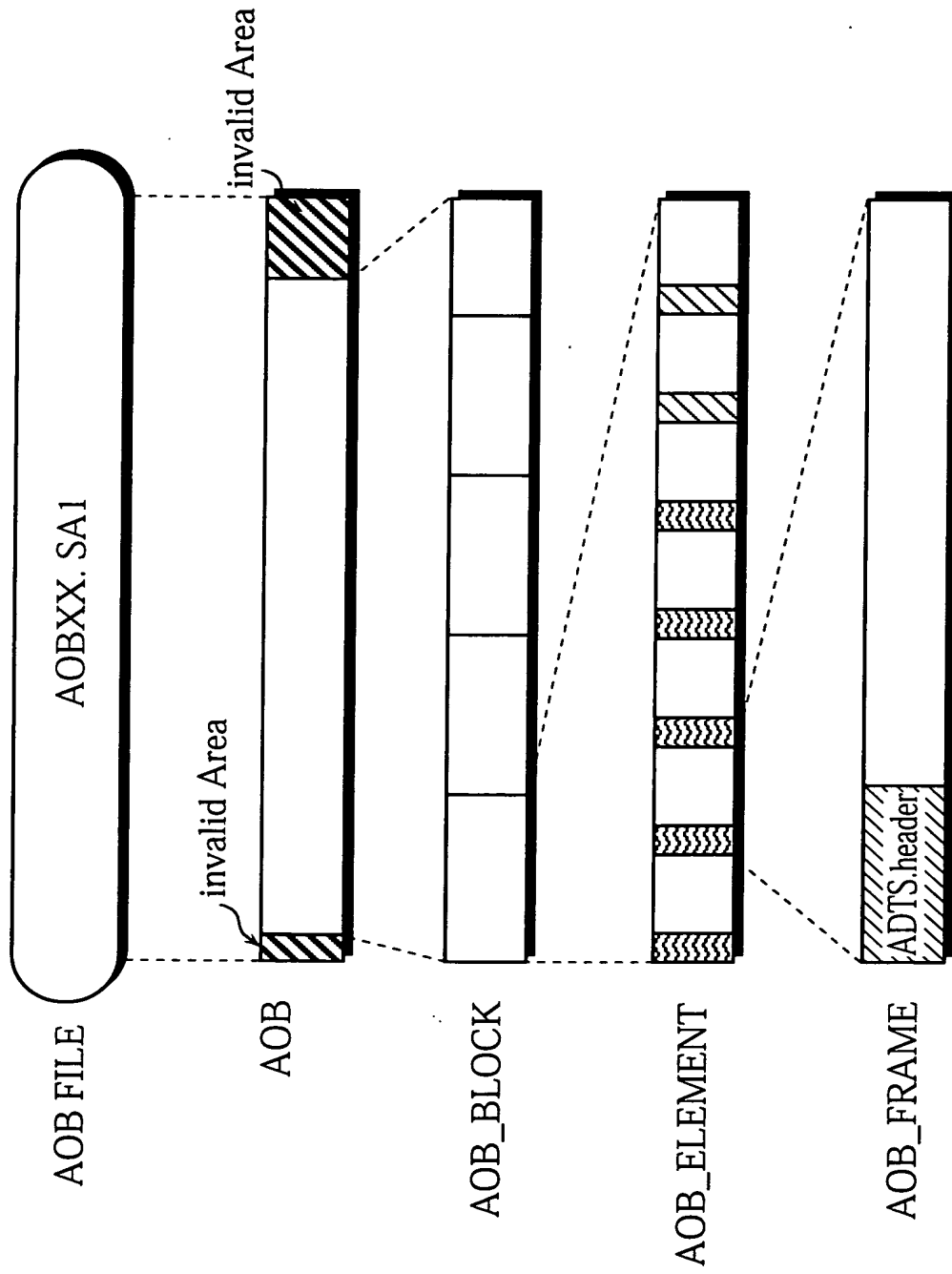


FIG. 11A

MPEG2-AAC format

format	Audio_Data_Transport_Stream(ADTS)
Profile	Low Complexity(LC) profile(mandatory)
bitrate per channel**	between 16kbit/s(min.)and 72kbit/s(max.) Other bitrates are optional.
sampling_frequency	48 kHz(mandatory) 44.1 kHz(mandatory) 32 kHz(mandatory) 24 kHz(mandatory) 22.05 kHz(mandatory) 16 kHz(mandatory)
channel_configuration	single_channel_element(mandatory) channel_pair_element(mandatory)
number_of_data_blocks_in_frame	1 header/1 raw_data_block(mandatory)

FIG. 11B

MPEG layer 3 format

format	MPEG-1 layer 3 MPEG-2 layer 3 low sampling frequency
bitrate per channel**	MPEG 1:between 16kbit/s and 96kbit/s MPEG 2 LSF:between 16kbit/s and 80kbit/s Other bitrates and variable bitrate are optional. Bitrate index "0000",i.e. "free format" is not supported.
sampling_frequency	48 kHz 44.1 kHz 32 kHz 24 kHz 22.05 kHz 16 kHz
mode	stereo joint_stereo single_cannel

FIG. 11C

Windows Media Audio format

format	Windows Media Audio format
bitrate per channel**	between 8kbit/s and 80kbit/s Other bitrates are optional.
sampling_frequency	48 kHz 44.1 kHz 32 kHz 22.05 kHz 16 kHz
mode	monaural stereo

FIG. 12

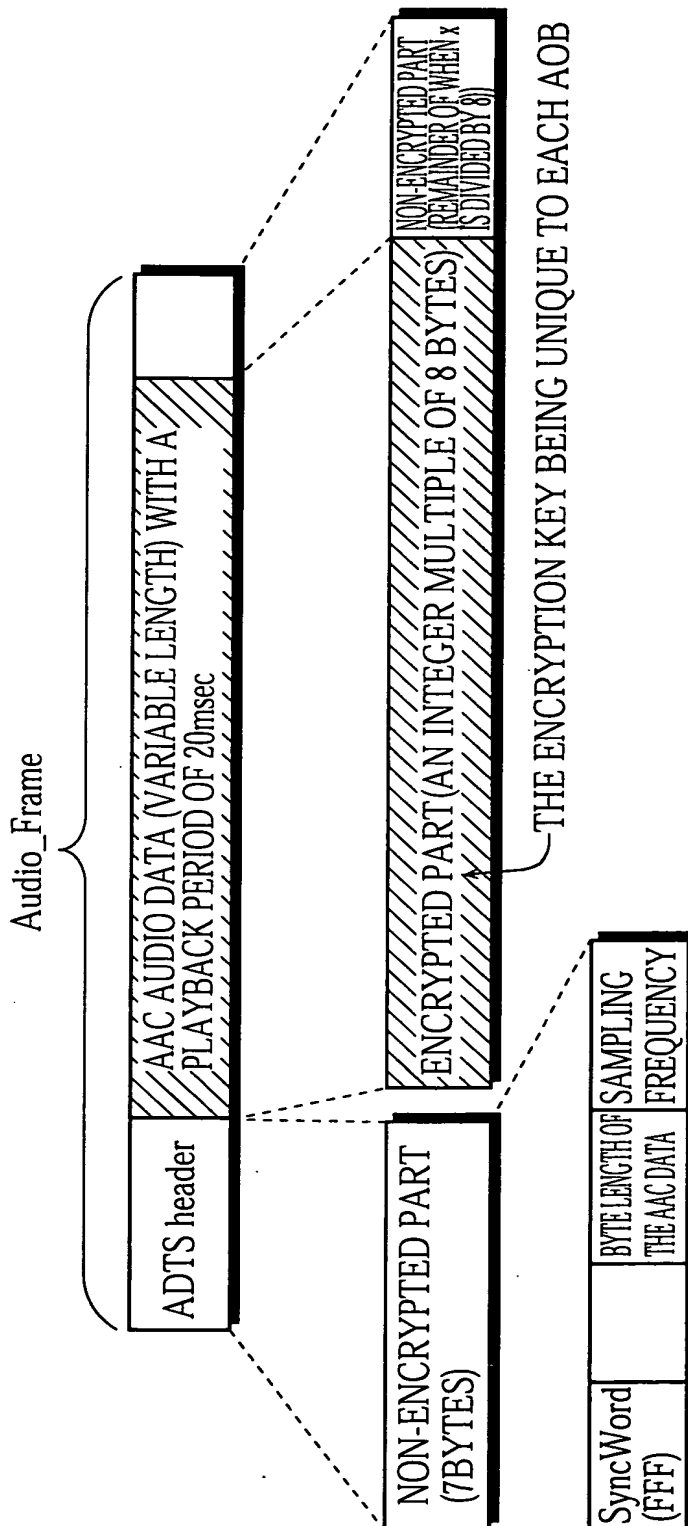


FIG. 13

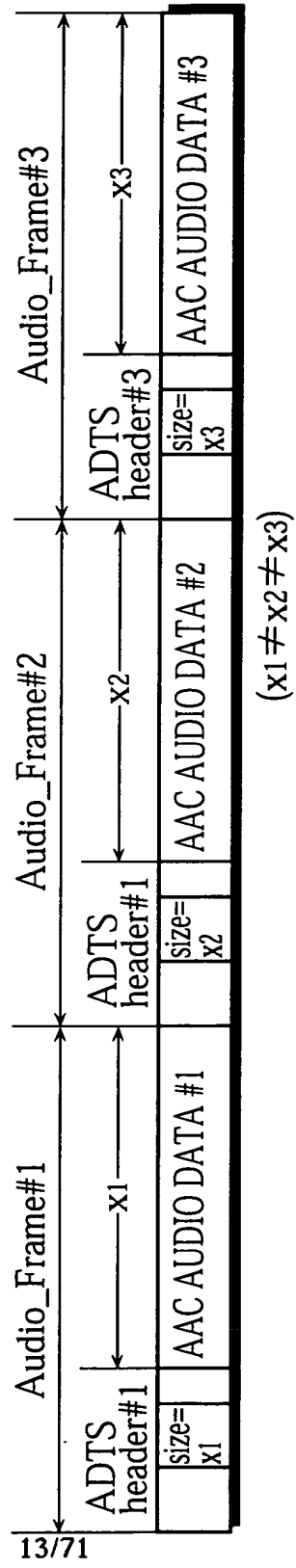
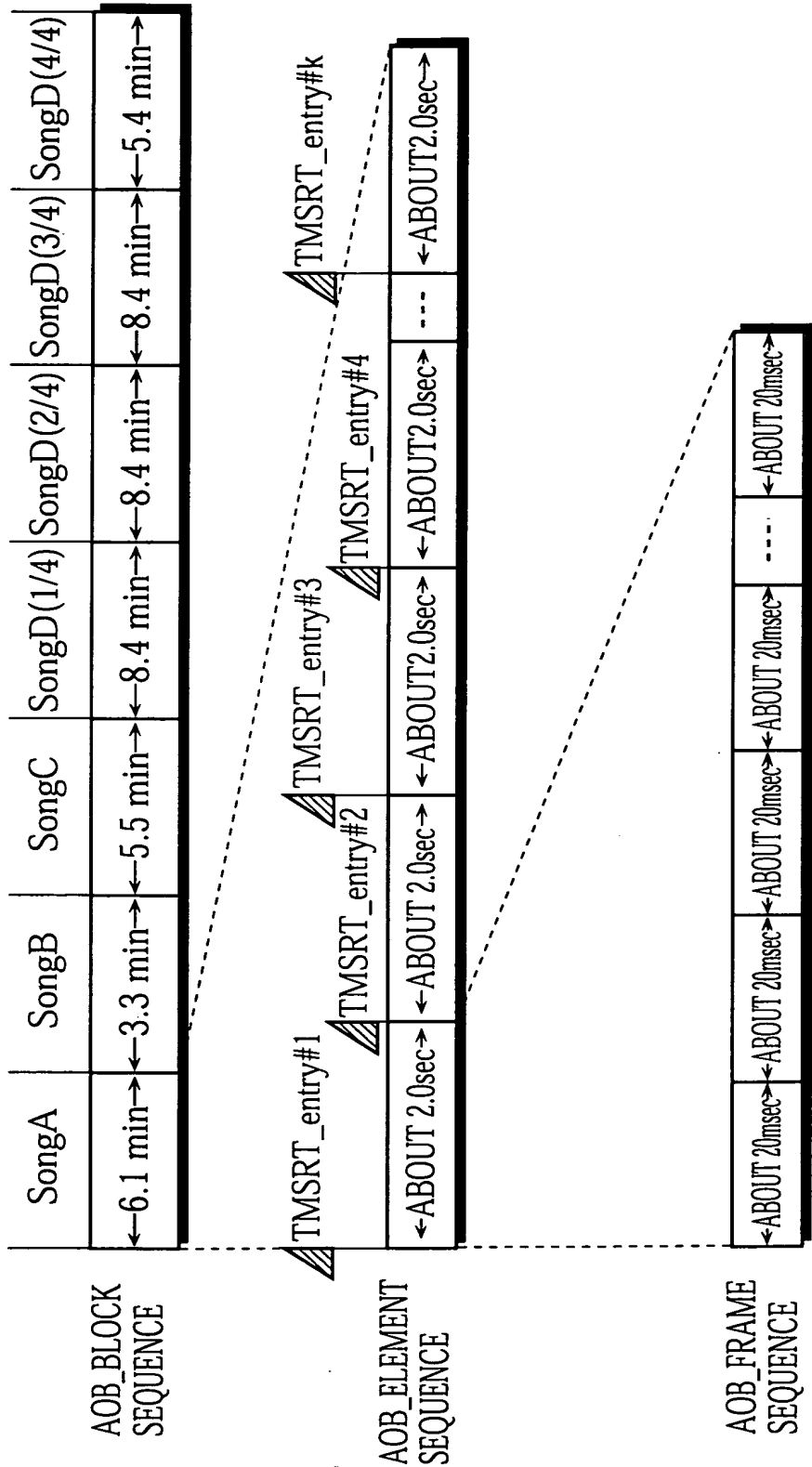


FIG. 14

sampling frequency	FNs_Middle_TMSRTE		
	AAC	MPEGlayer3	WMA
48kHz	47*N	42*N	× × ×
44.1kHz	43*N	38*N	× × ×
32kHz	32*N	28*N	× × ×
24kHz	24*N	42*N	× × ×
22.05kHz	22*N	38*N	× × ×
16kHz	16*N	28*N	× × ×

※ N BEING THE PLAYBACK PERIOD "TIME_LENGTH"
OF AN AOB_ELEMENT TO AN ACCURACY OF 1/1000TH
OF ONE SECOND

FIG. 15



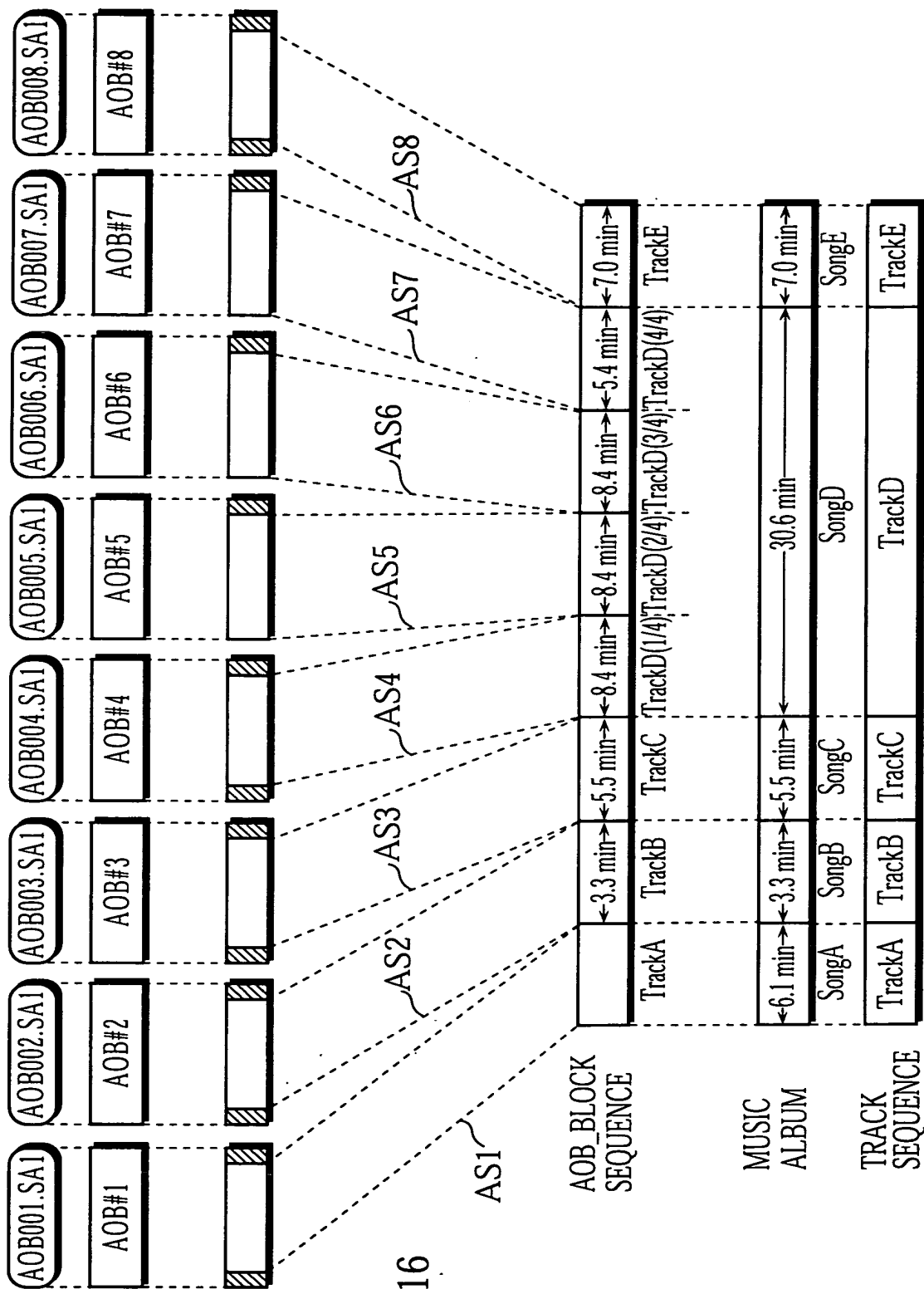


FIG. 16

FIG. 17

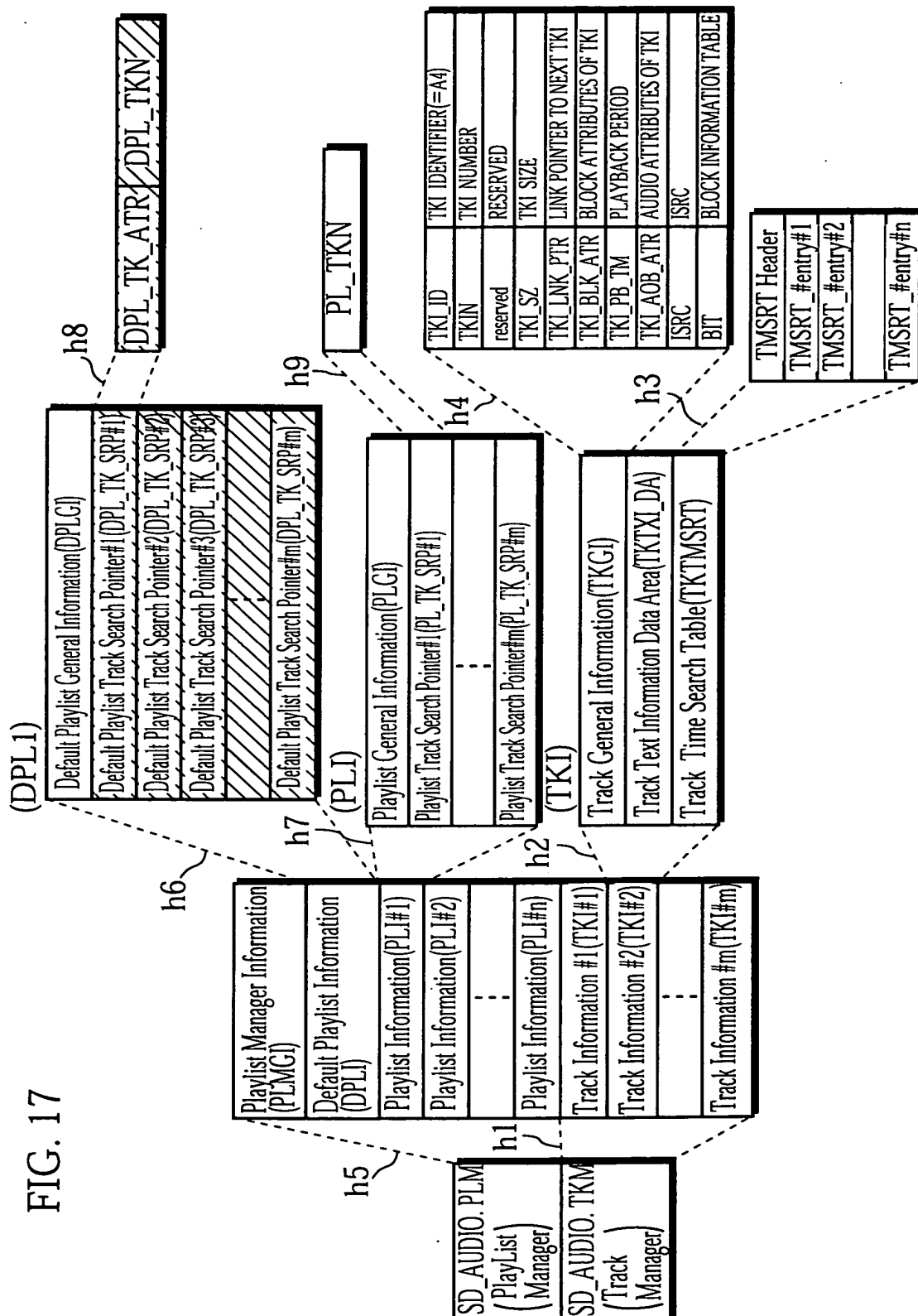


FIG. 18

(PLMG)

Playlist Manager Information(PLMGI)	FIXED LENGTH (2.5KByte)
Default Playlist Information(DPLI)	
Playlist Information#1 (PLI#1)	FIXED LENGTH (512Byte)
⋮	
Playlist Information#n(PLI#n) $(1 \leq n \leq 99)$	FIXED LENGTH (512Byte)
Track Information #1 (TKI#1)	FIXED LENGTH (1024Byte)
⋮	
Track Information #m(TKI#m)	FIXED LENGTH (1024Byte)
$(1 \leq m \leq 999)$	

FIG. 19

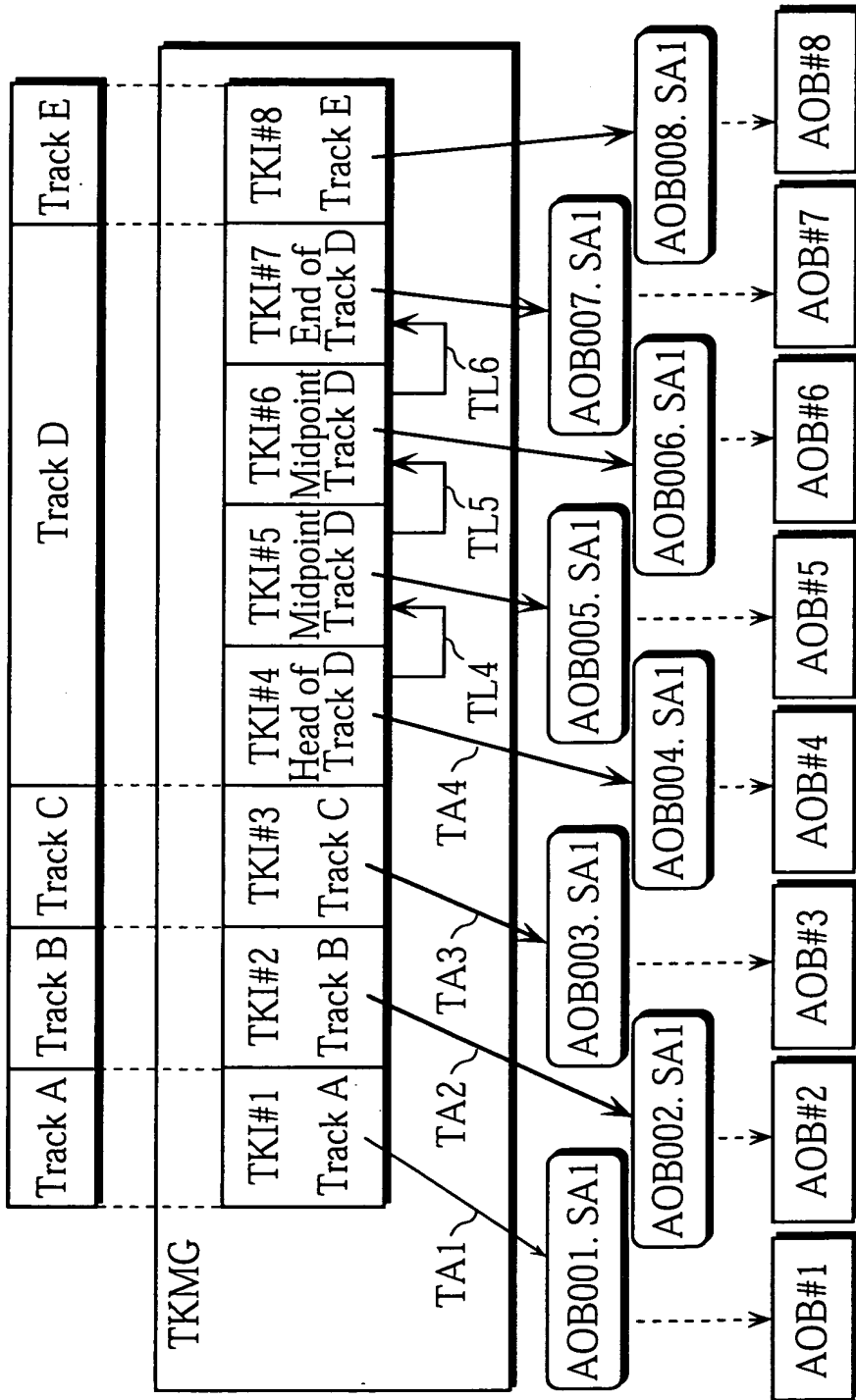


FIG. 20

(DESCRIPTION ORDER)				
RELATIVE BYTE POSITION	FIELD NAME	CONTENT	NUMBER OF BYTES	
0 to 1	TMSRT ID	IDENTIFIER OF TMSRT	2 BYTES	
2 to 3	reserved	RESERVED	2 BYTES	
4 to 7	Total TMSRT_entry Number	TOTAL NUMBER OF TMSRT_entries	4 BYTES	
TOTAL			8 BYTES	

(DESCRIPTION ORDER)				
RELATIVE BYTE POSITION	FIELD NAME	CONTENT	NUMBER OF BYTES	
0 to 3	TMSRT_ENT	Size of AOB_ELEMENT	2 Byte × 252	
TOTAL			TOTAL 504 BYTES	

FIG. 21

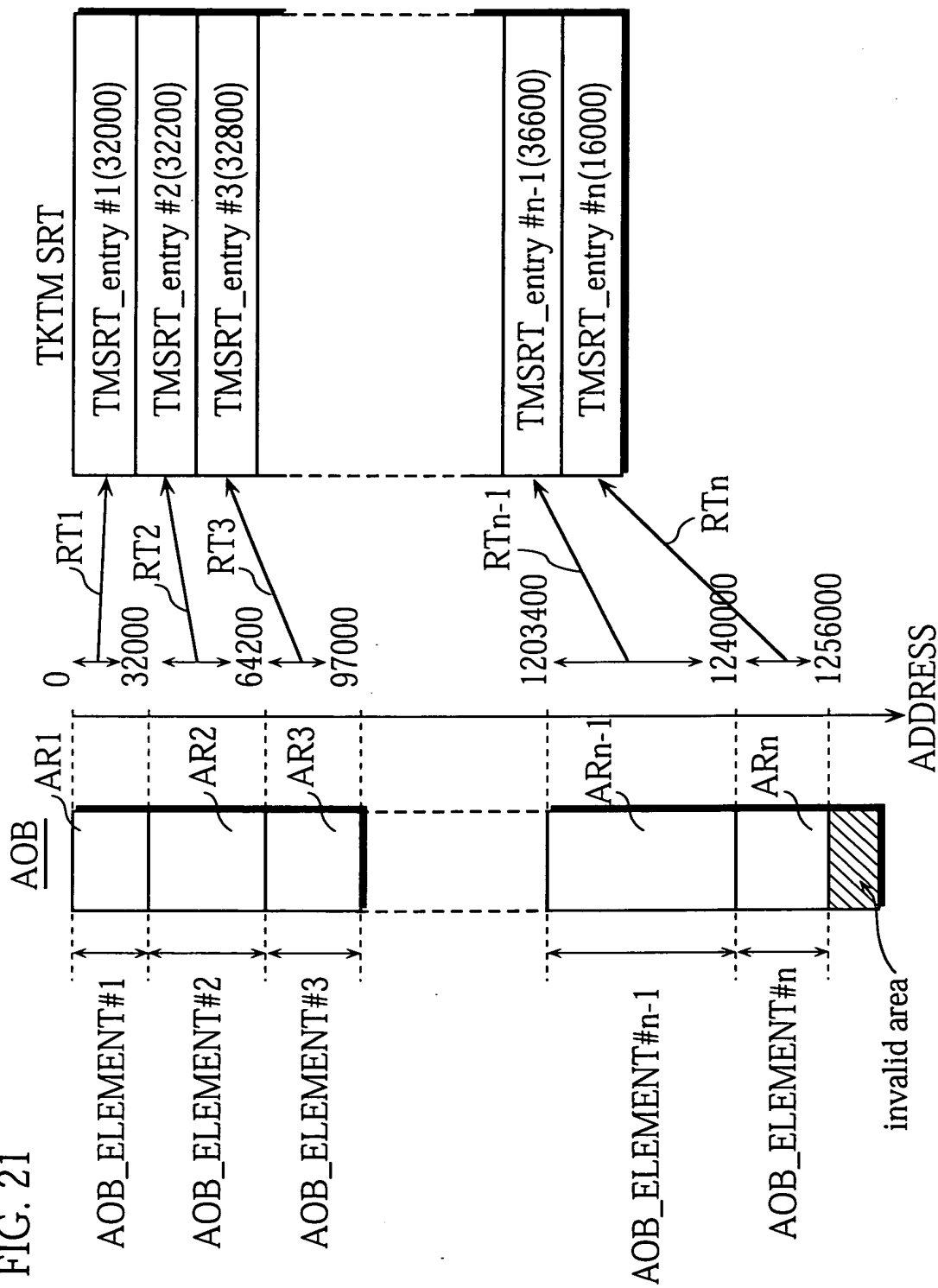


FIG. 22

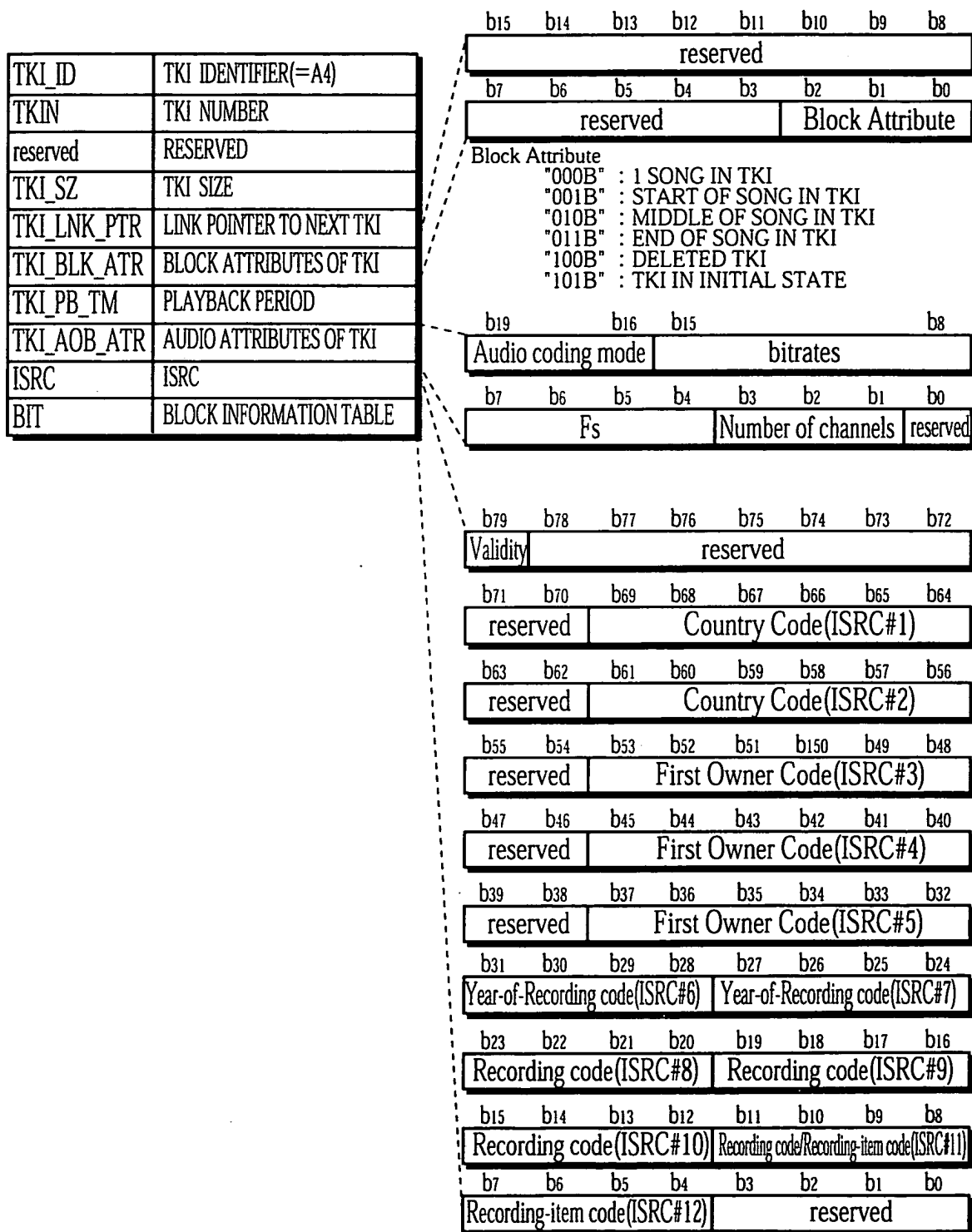


FIG. 23A

RELATIVE BYTE POSITION	FIELD NAME	CONTENT	NUMBER OF BYTES
60 to 63	DATA_OFFSET	FIRST ADDRESS OF AOB_BLOCK	4 BYTES
64 to 67	SZ_DATA	DATA LENGTH OF AOB_BLOCK	4 BYTES
68 to 71	TMSRTE_Ns	NUMBER OF TMSRT_entries	4 BYTES
72 to 73	FNs_1st_TMSRTE	NUMBER OF AOB_FRAMES IN FIRST AOB_ELEMENT	2 BYTES
74 to 75	FNs_Last_TMSRTE	NUMBER OF AOB_FRAMES IN LAST AOB_ELEMENT	2 BYTES
76 to 77	FNs_Middle_TMSRTE	NUMBER OF AOB_FRAMES IN AOB_ELEMENTS	2 BYTES
78 to 79	TIME_LENGTH	PLAYBACK PERIOD OF AOB_ELEMENTS	2 BYTES
TOTAL			20 BYTES

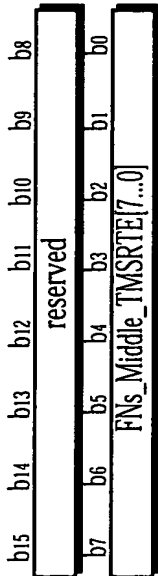


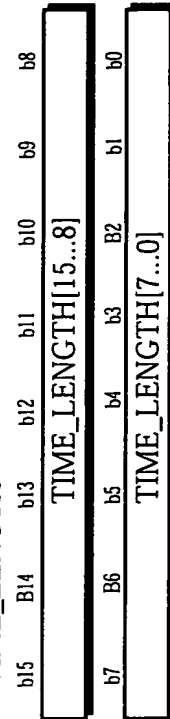
FIG. 23B

sampling frequency	FNs_Middle_TMSRTE	
	AAC	MPEGlayer3 WMA
48kHz	47*N	42*N
44.1kHz	43*N	38*N
32kHz	32*N	28*N
24kHz	24*N	42*N
22.05kHz	22*N	38*N
16kHz	16*N	28*N

※ N BEING THE PLAYBACK PERIOD "TIME_LENGTH"
OF AN AOB_ELEMENT TO AN ACCURACY OF 1/1000TH
OF ONE SECOND

FIG. 23C

TIME_LENGTH



TIME_LENGTH=2000 FOR AAC.MP3

FIG. 24

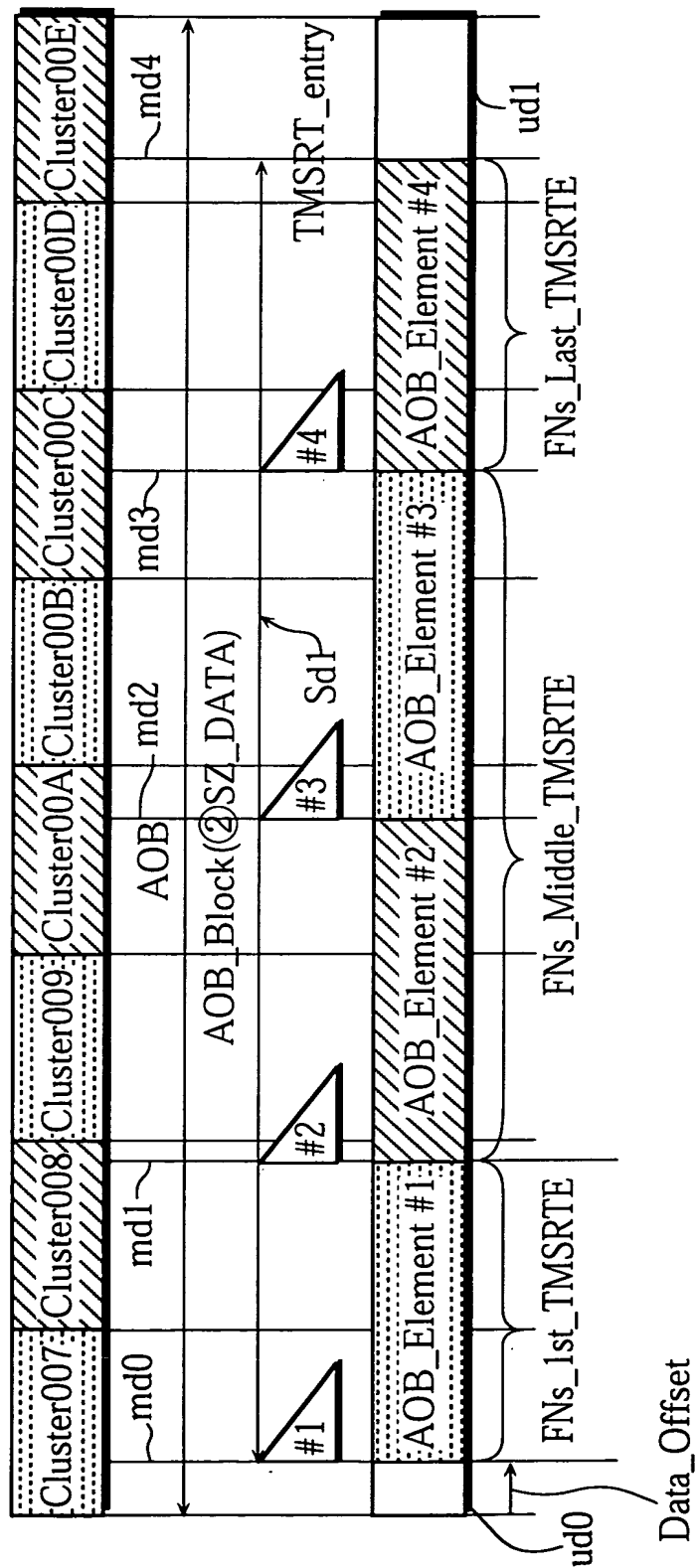


FIG. 25

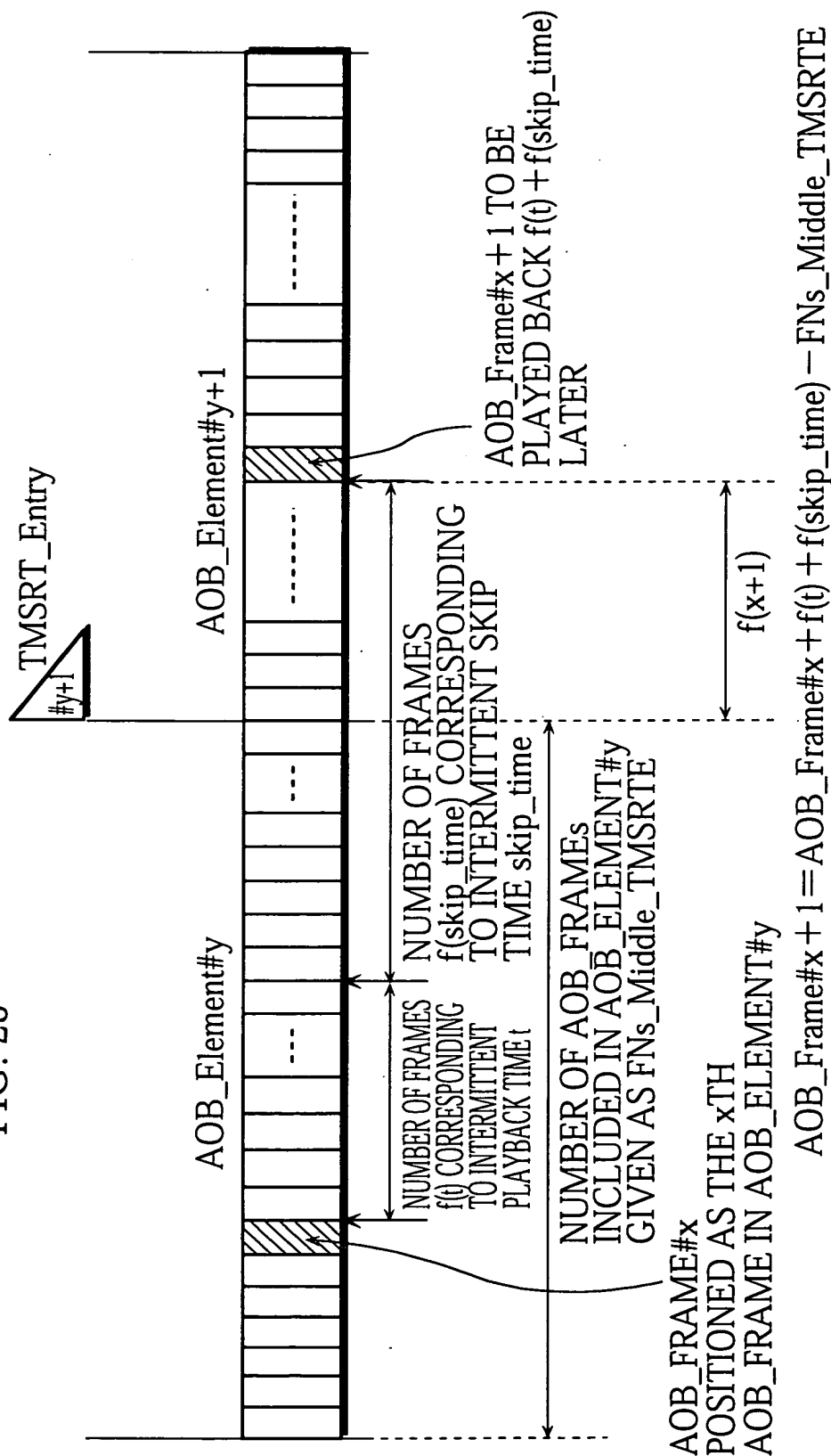


FIG. 27A

DELETION OF Track B(case 1)

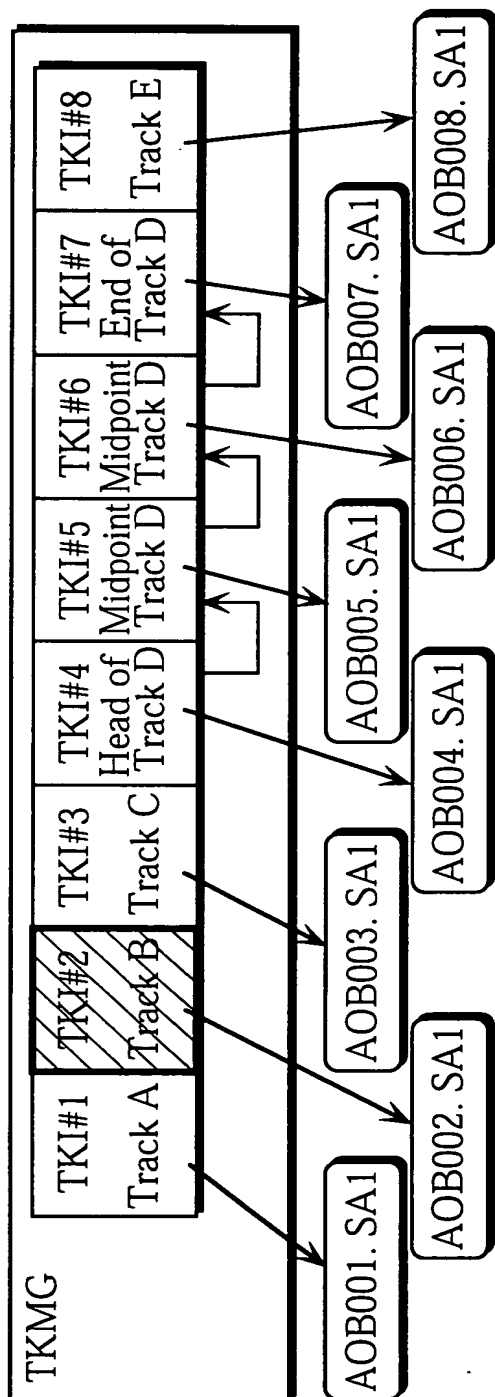


FIG. 27B

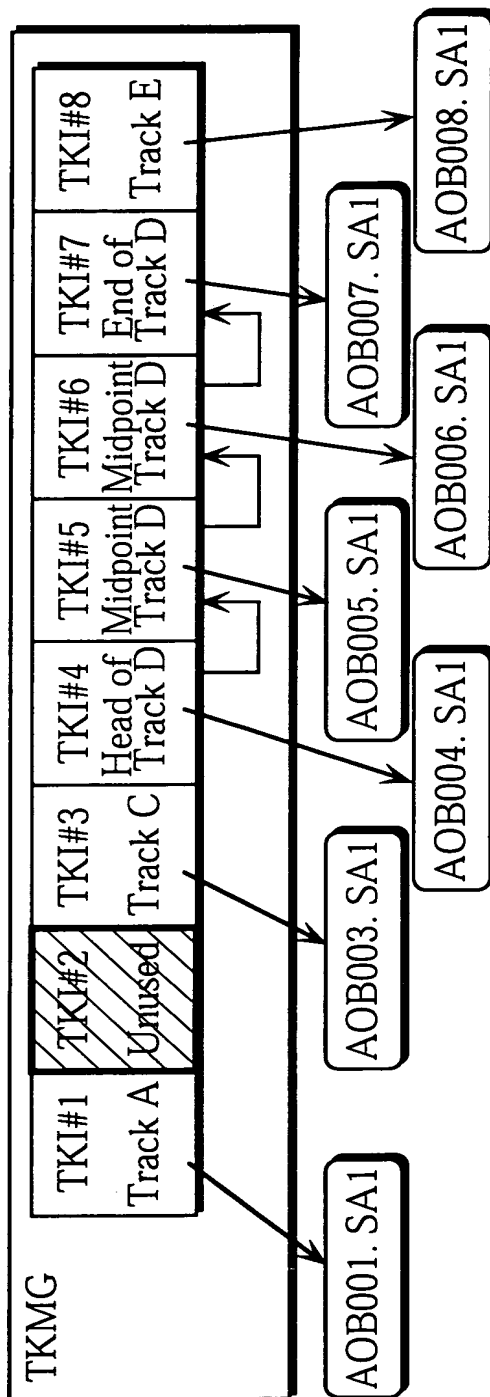


FIG. 28A UPDATING TrackManager USING UNUSED TKI AT DIFFERENT POSITIONS(case 2)

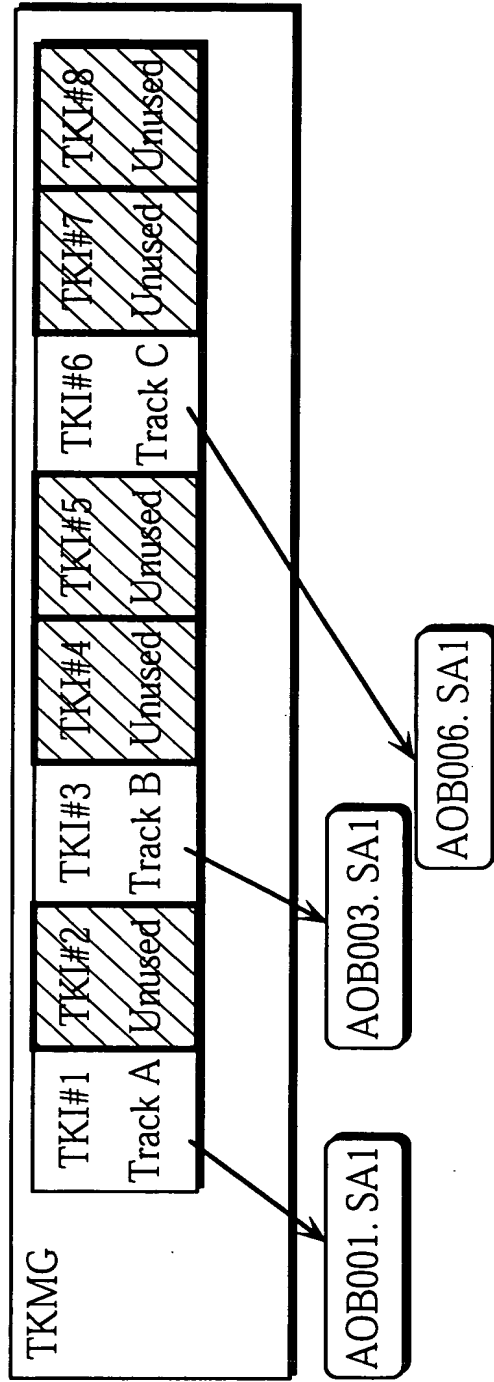


FIG. 28B

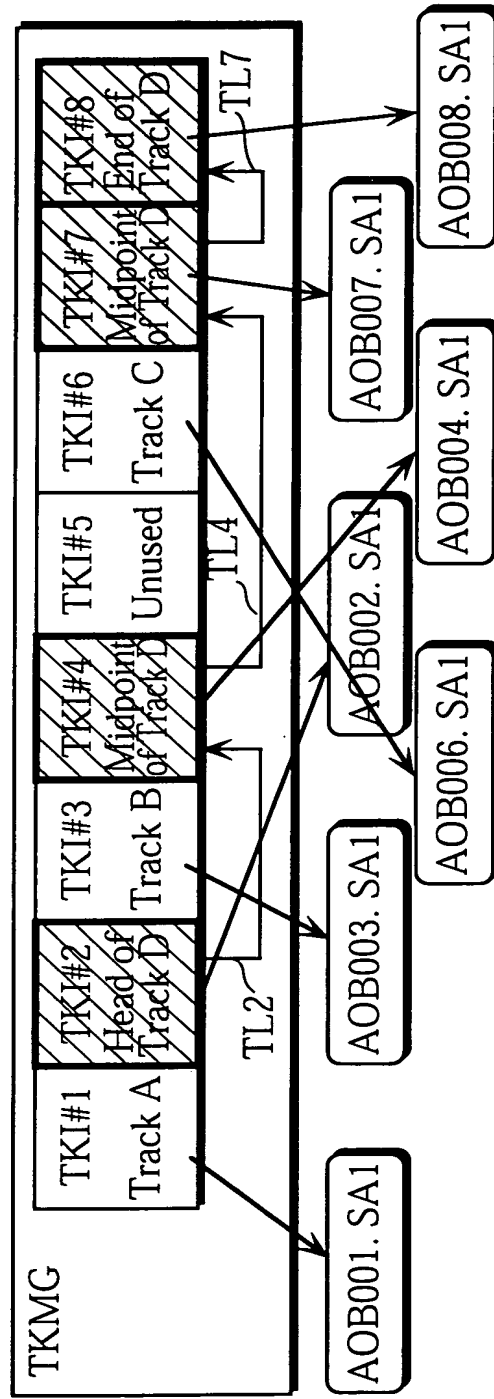


FIG. 29A

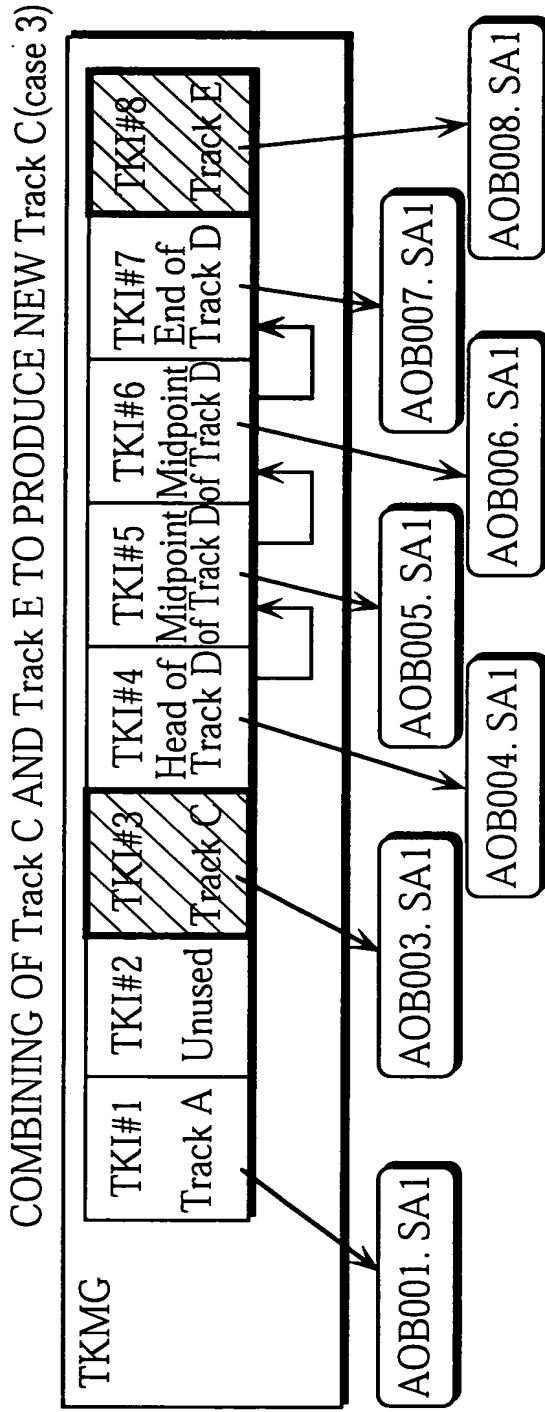


FIG. 29B

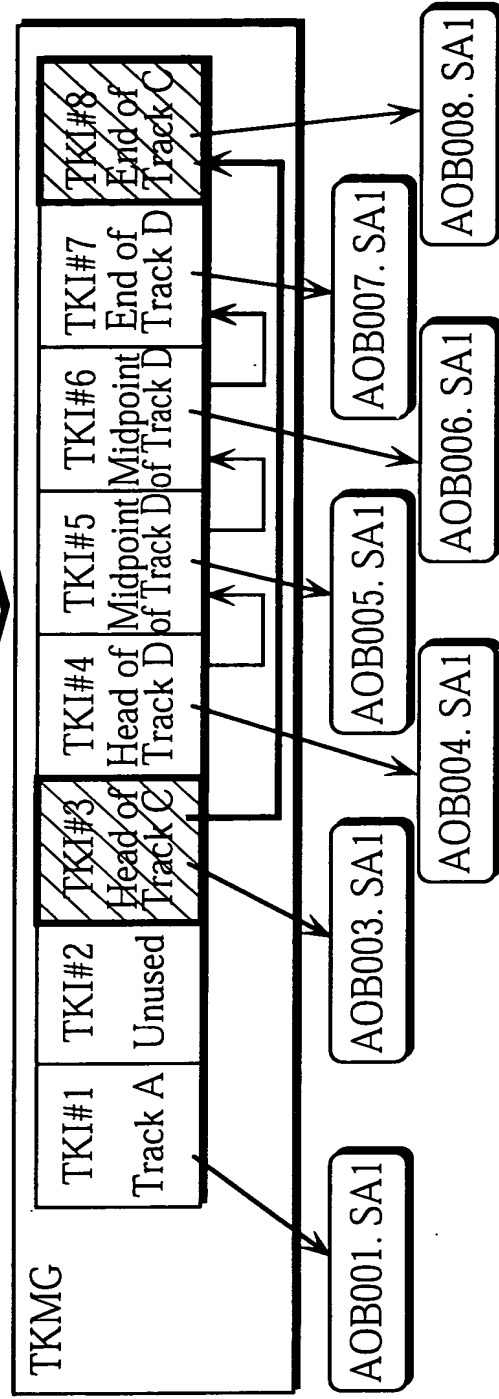


FIG. 30A

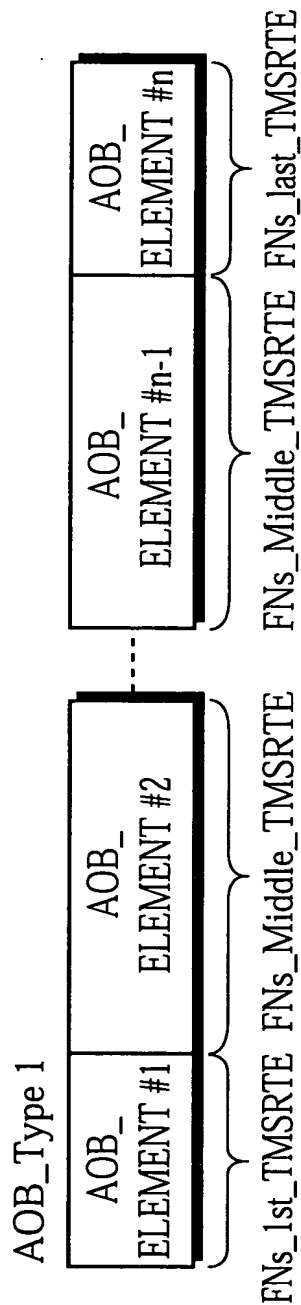


FIG. 30B

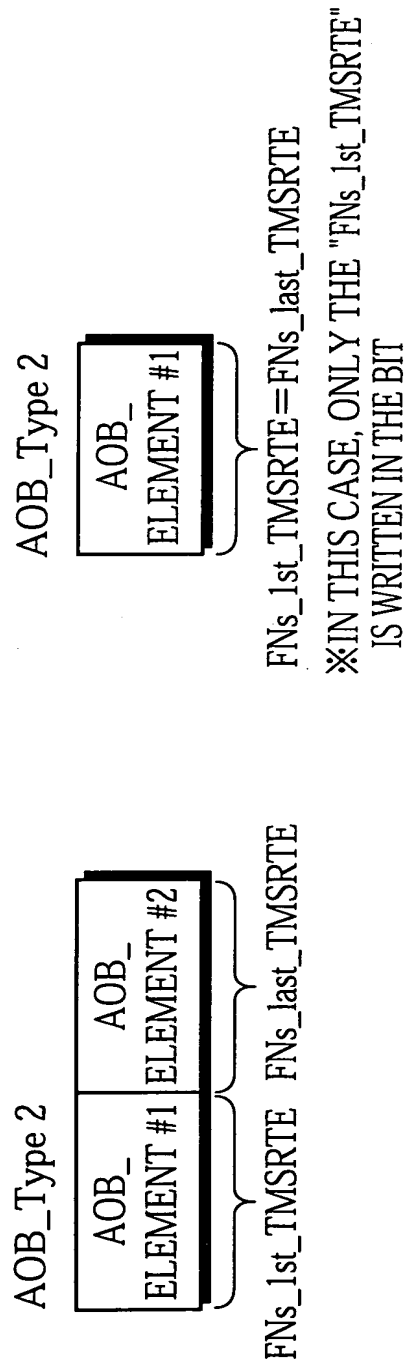
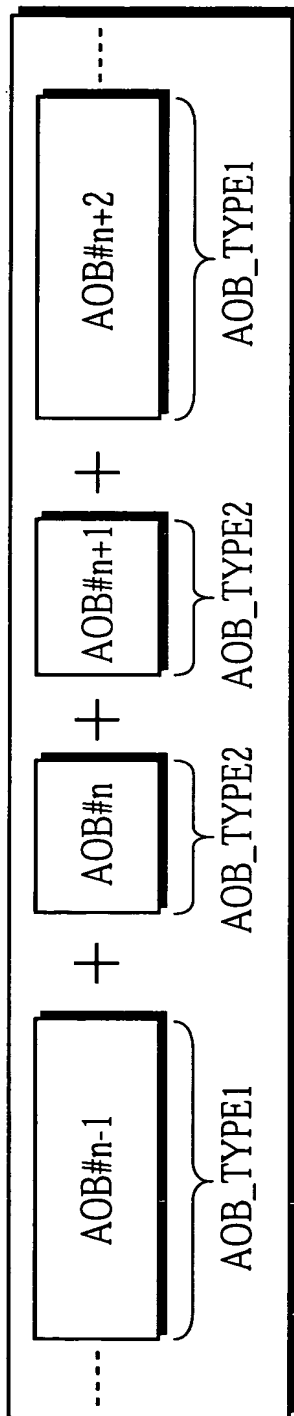


FIG. 31A

PATTERN WHERE COMBINING OF AOBs POSSIBLE



31/71

FIG. 31B

PATTERN WHERE COMBINING OF AOBs NOT POSSIBLE

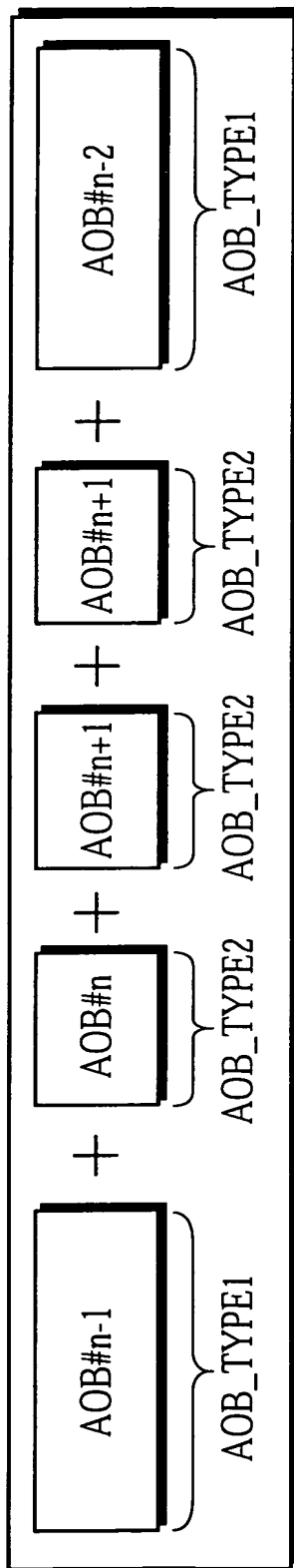


FIG. 32A

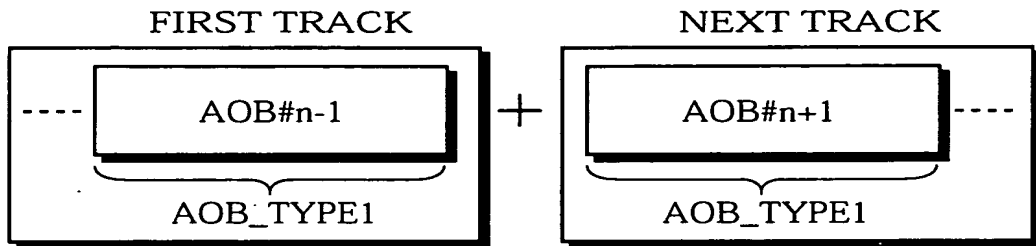


FIG. 32B

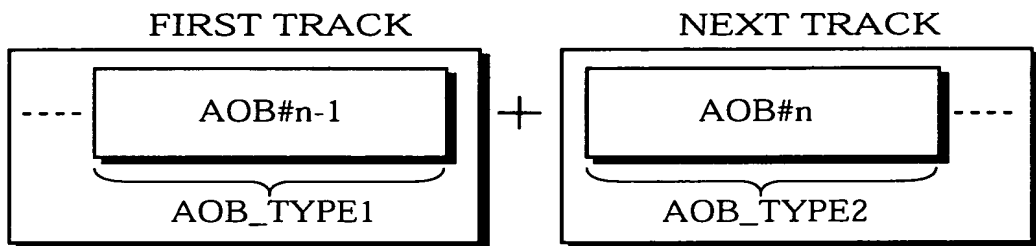


FIG. 32C

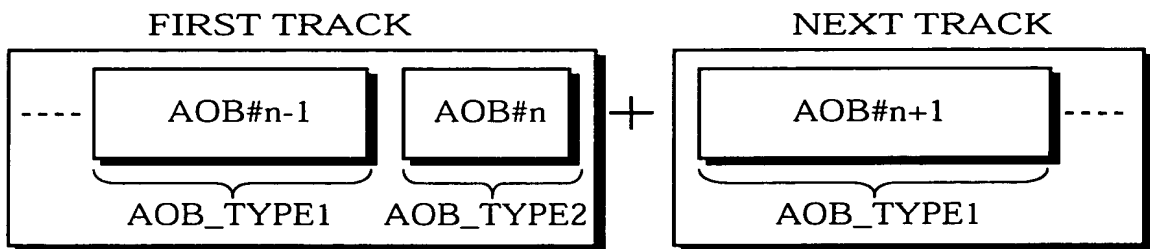


FIG. 32D

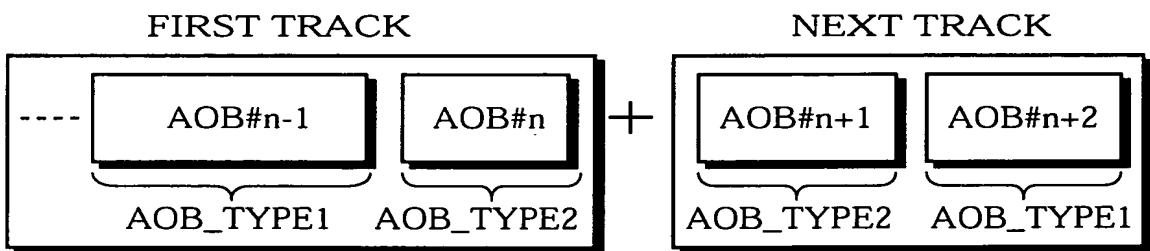


FIG. 32E

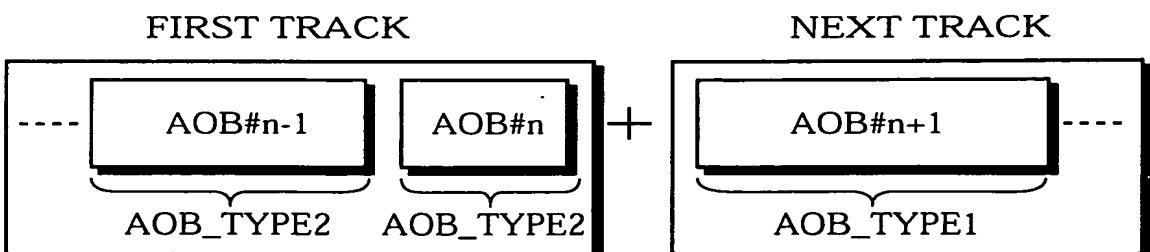


FIG. 33A

DIVISION OF Track C INTO Track C AND Track F(case 4)

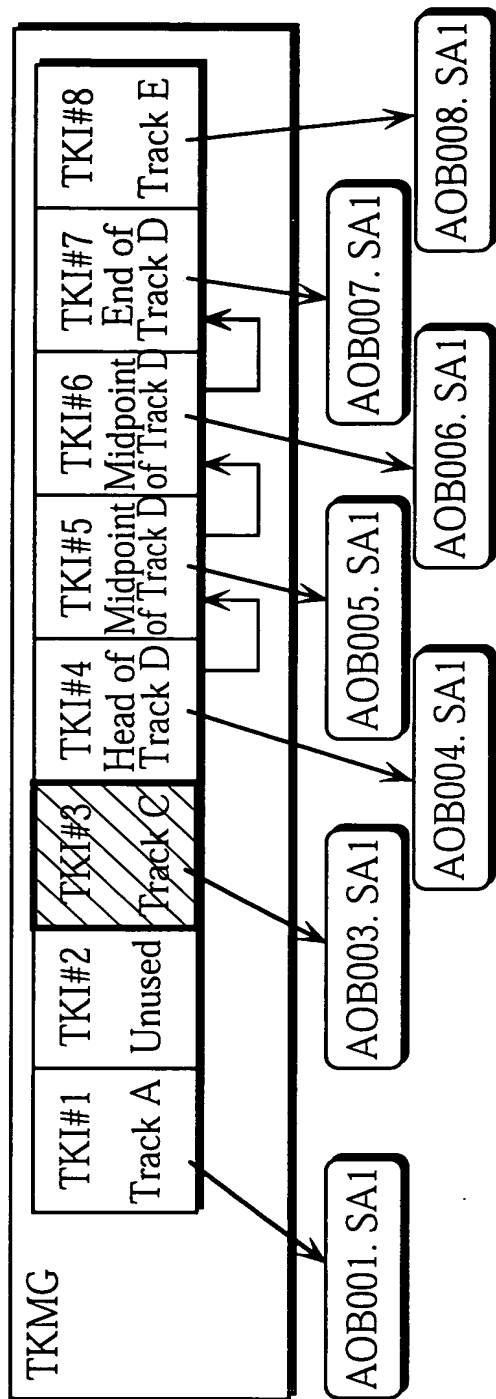


FIG. 33B

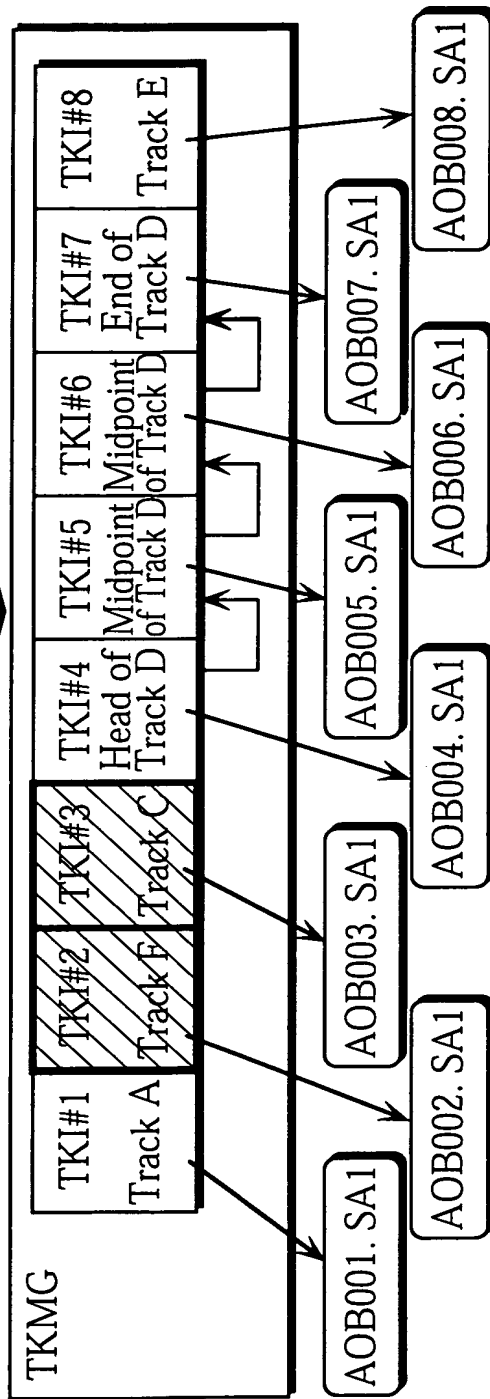


FIG. 34A

SD-Audio DIRECTORY ENTRY

FILE NAME	FILE NAME EXTENSION	FIRST CLUSTER NUMBER IN FILE
AOB003	SA 1	007

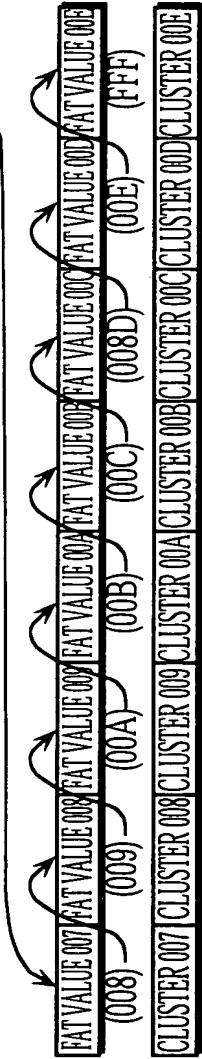


FIG. 34B

SD-Audio DIRECTORY ENTRIES

FILE NAME	FILE NAME EXTENSION	FIRST CLUSTER NUMBER IN FILE
AOB002	SA 1	00F
FILE NAME	FILE NAME EXTENSION	FIRST CLUSTER NUMBER IN FILE
AOB003	SA 1	007

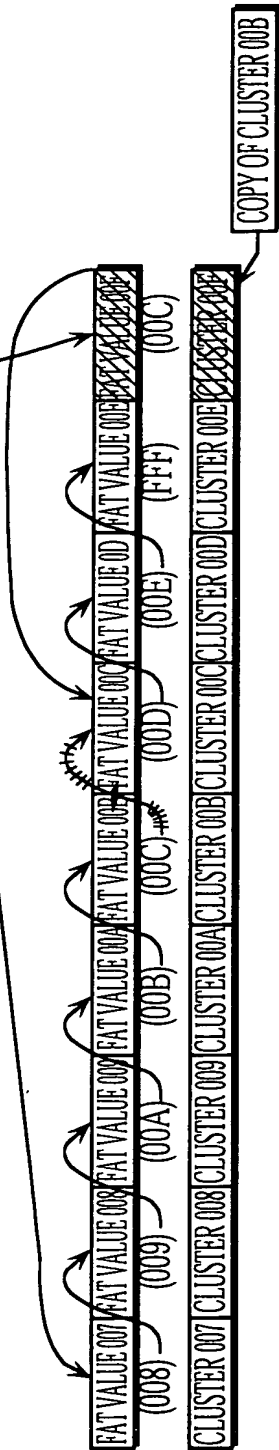


FIG. 35A

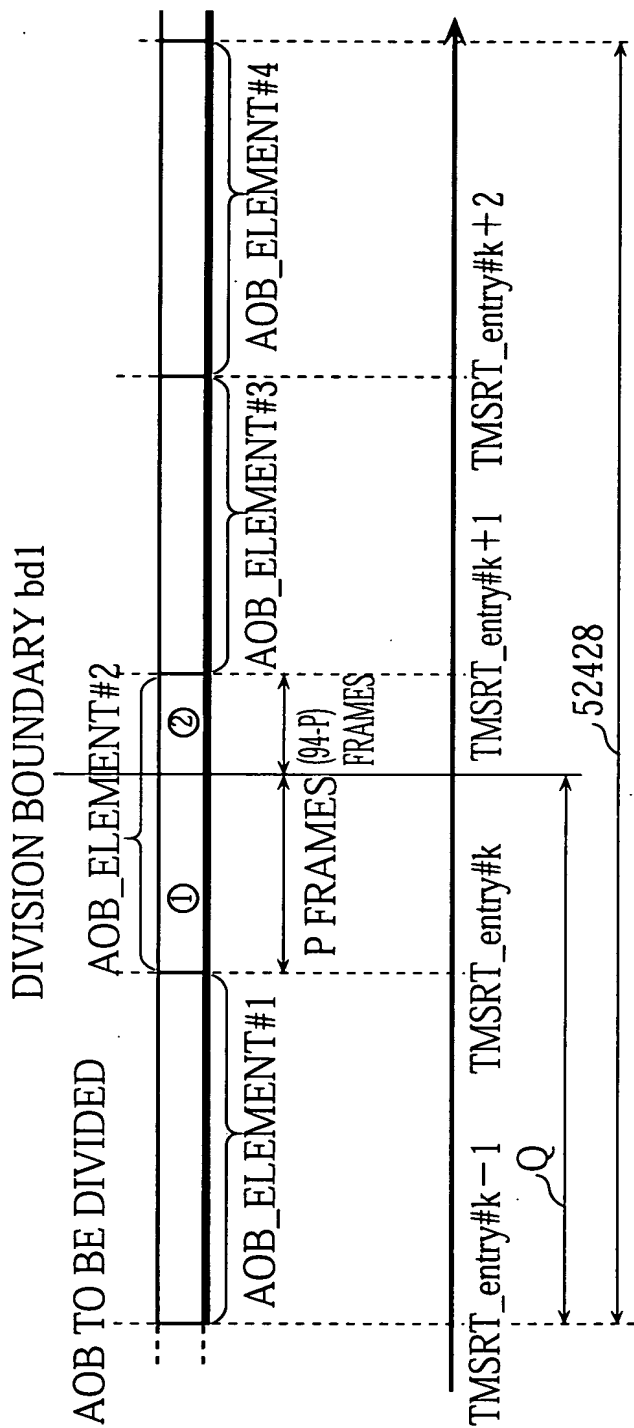


FIG. 35B

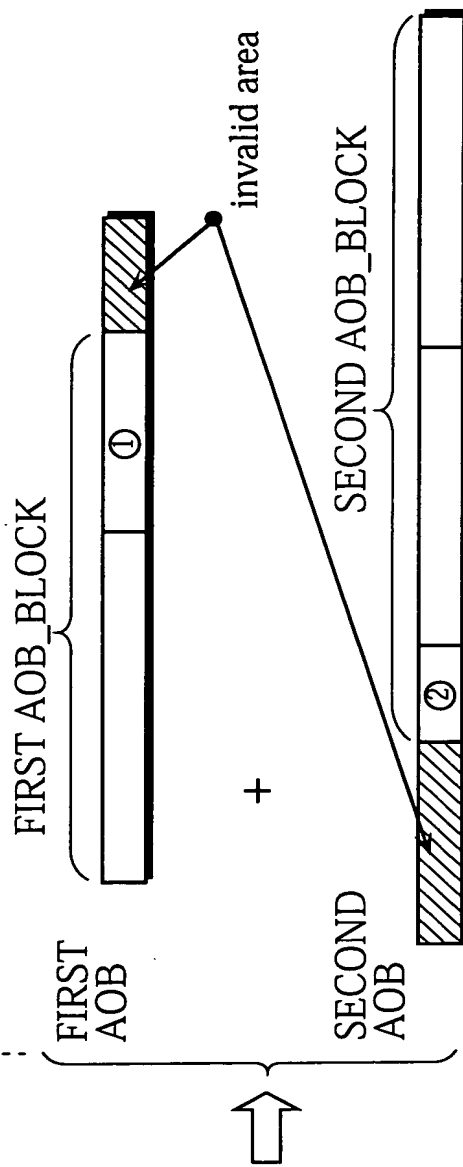


FIG. 37

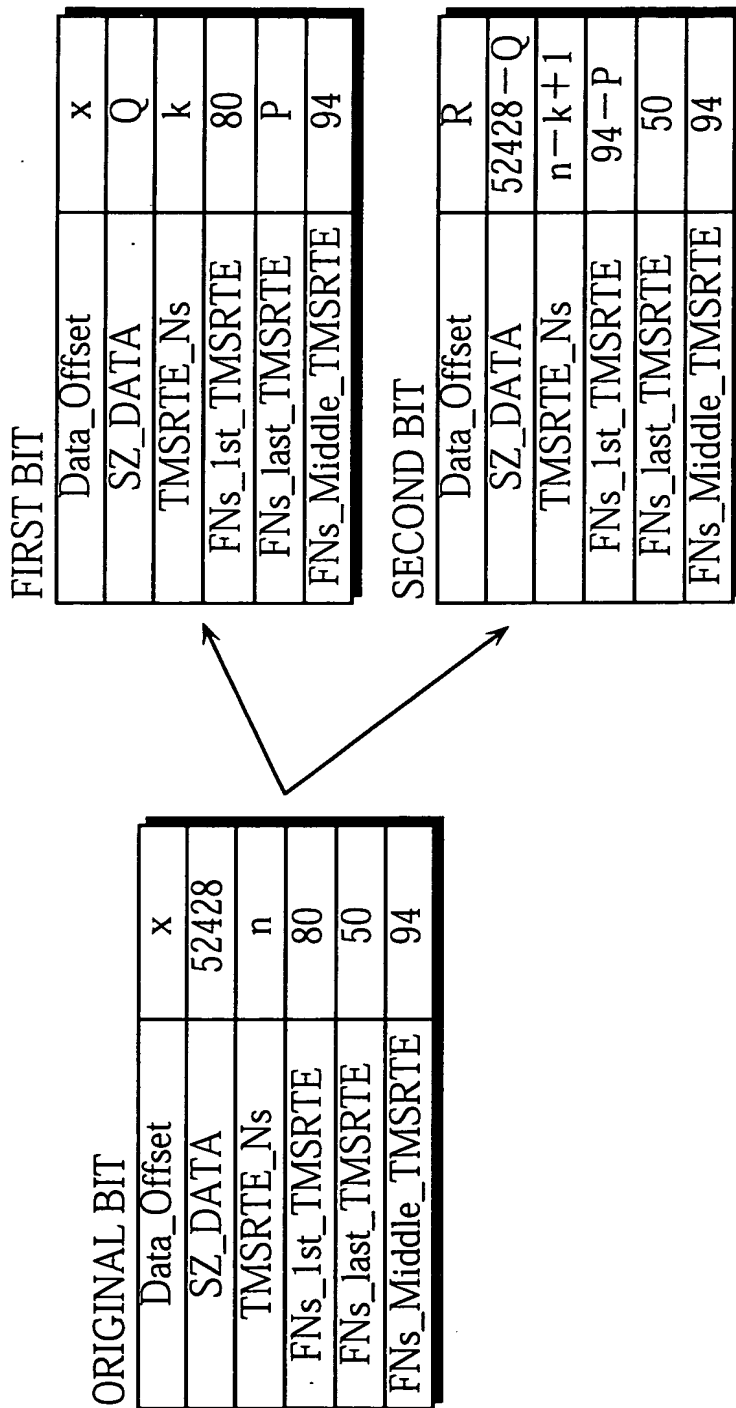


FIG. 38

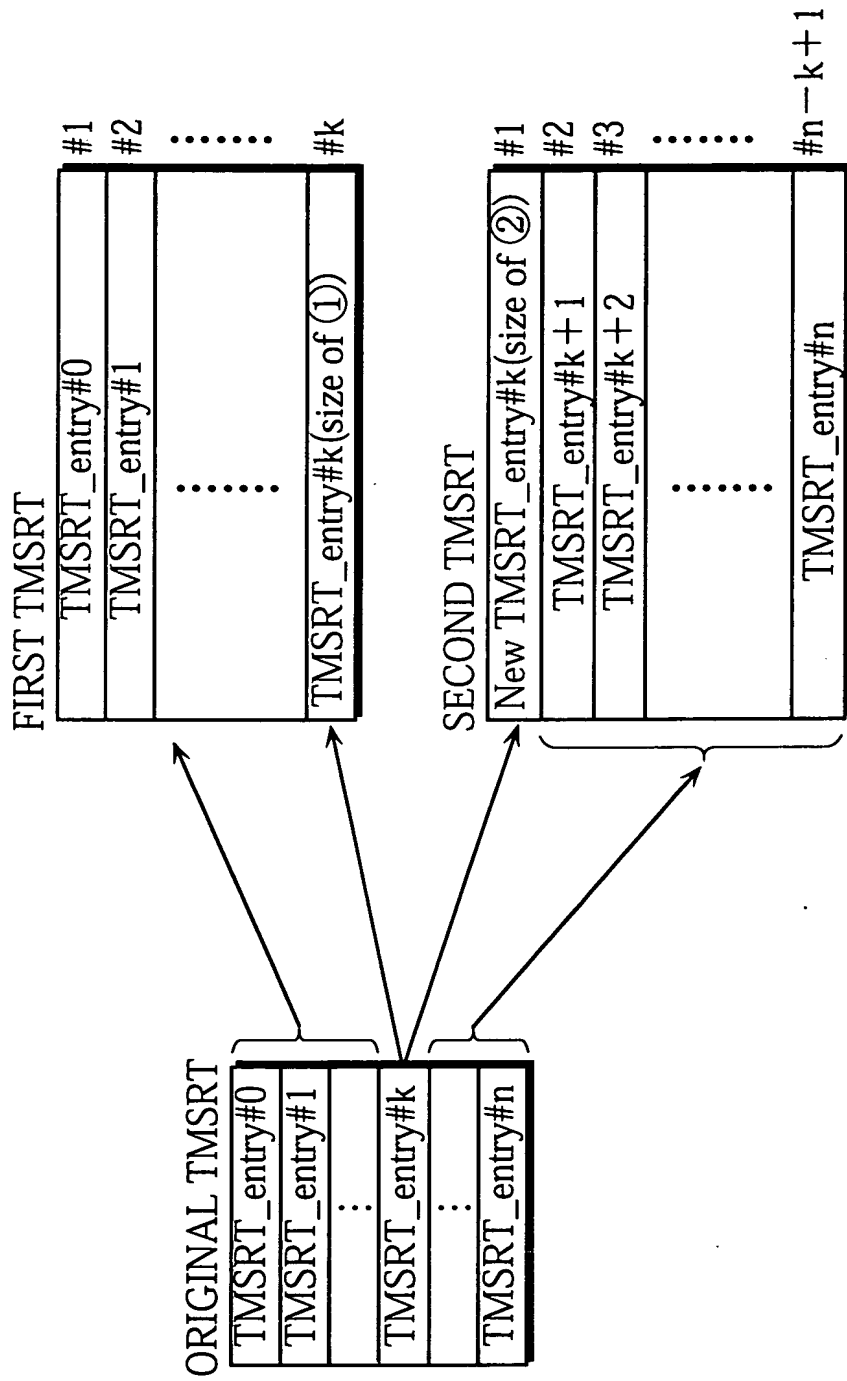


FIG. 39A

ATTRIBUTES OF DPL_TK_ATR

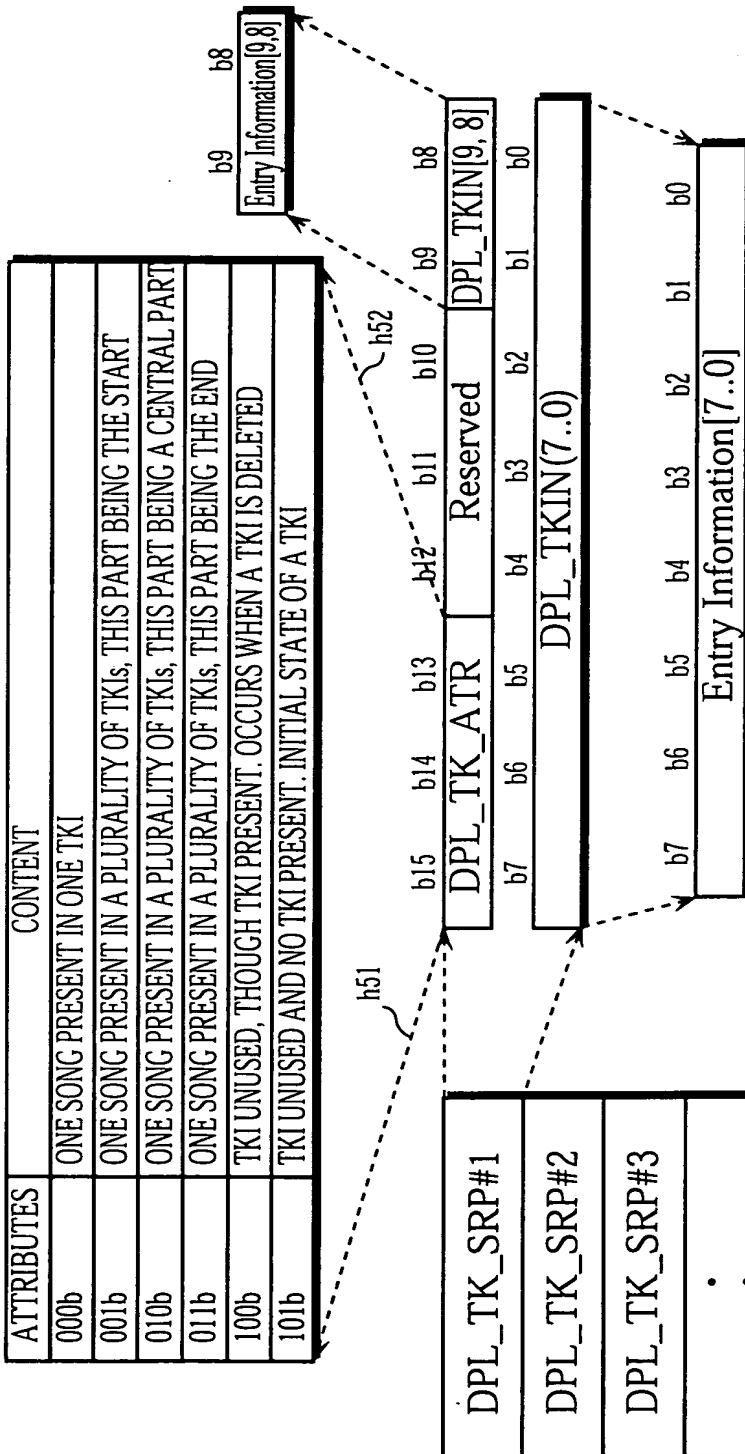


FIG. 39B



FIG. 40

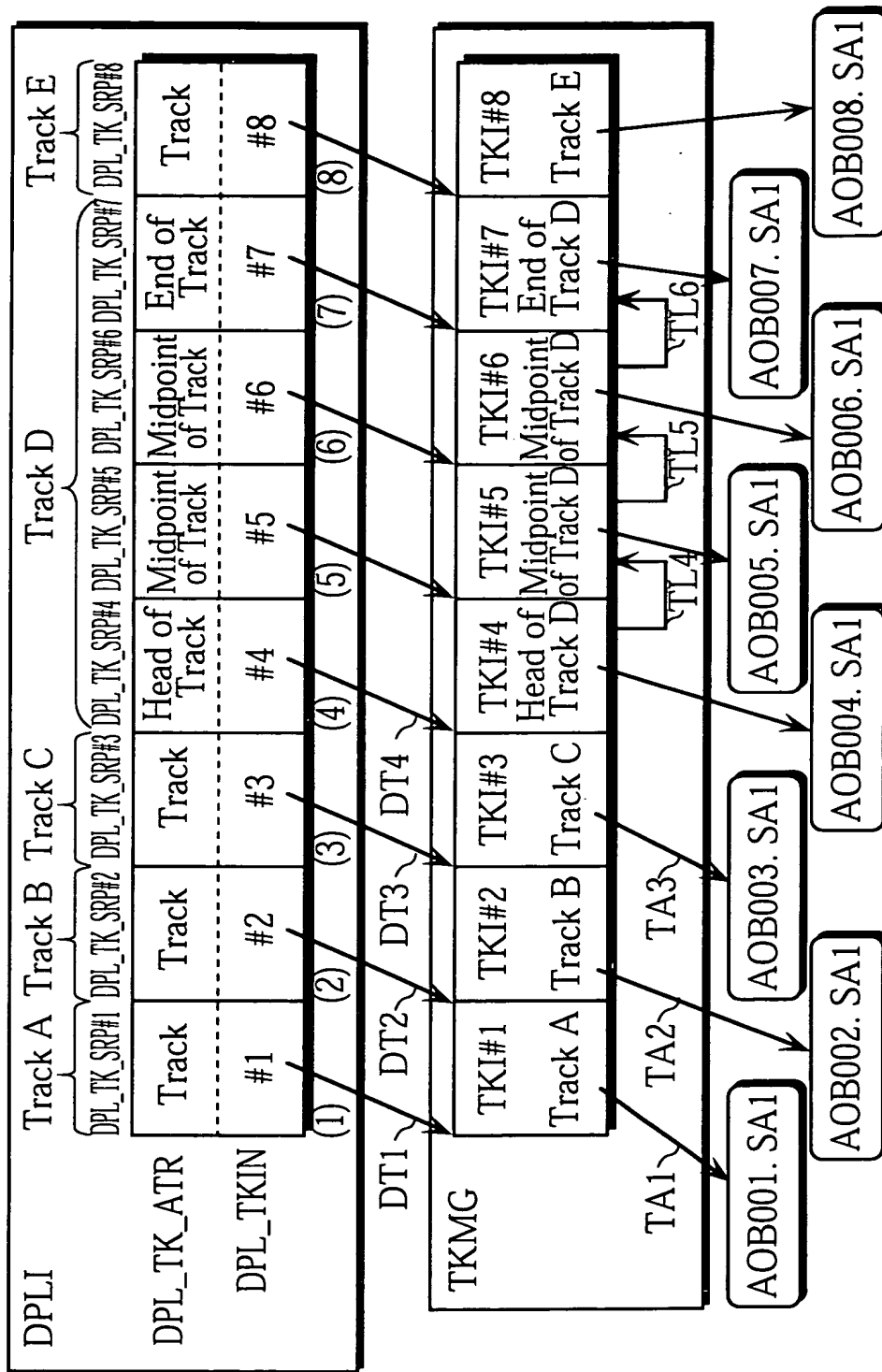


FIG. 41

DPLI	Track A		Track B		Track C		Track D		Track E	
	DPL_TK_SRP#1		DPL_TK_SRP#2		DPL_TK_SRP#3		DPL_TK_SRP#4		DPL_TK_SRP#7	
DPL_TK_ATR	Track		Track		Track		Head of Track	Midpoint of Track	End of Track	Track
DPL_TKIN	#1		#2		#3		#4	#5	#6	#7
										#8

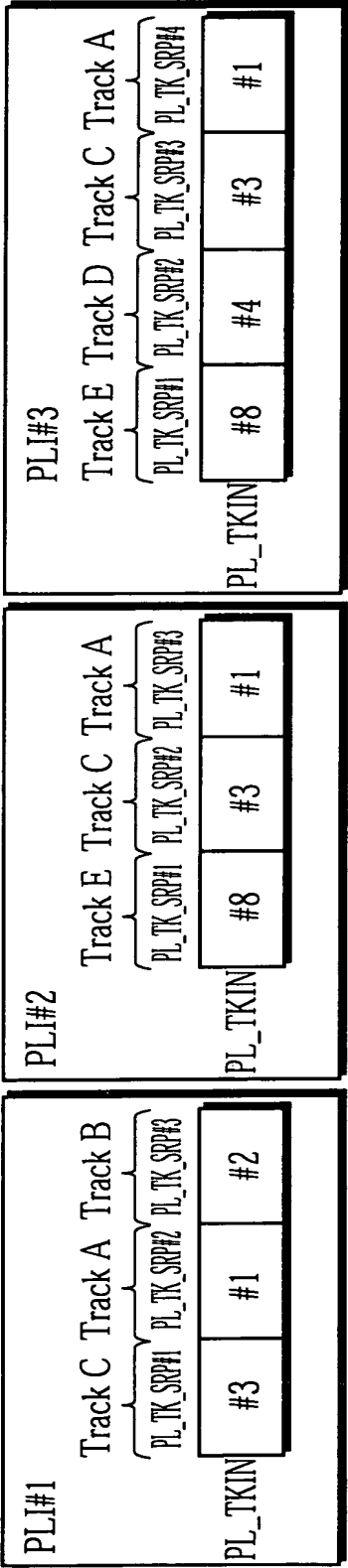


FIG. 42

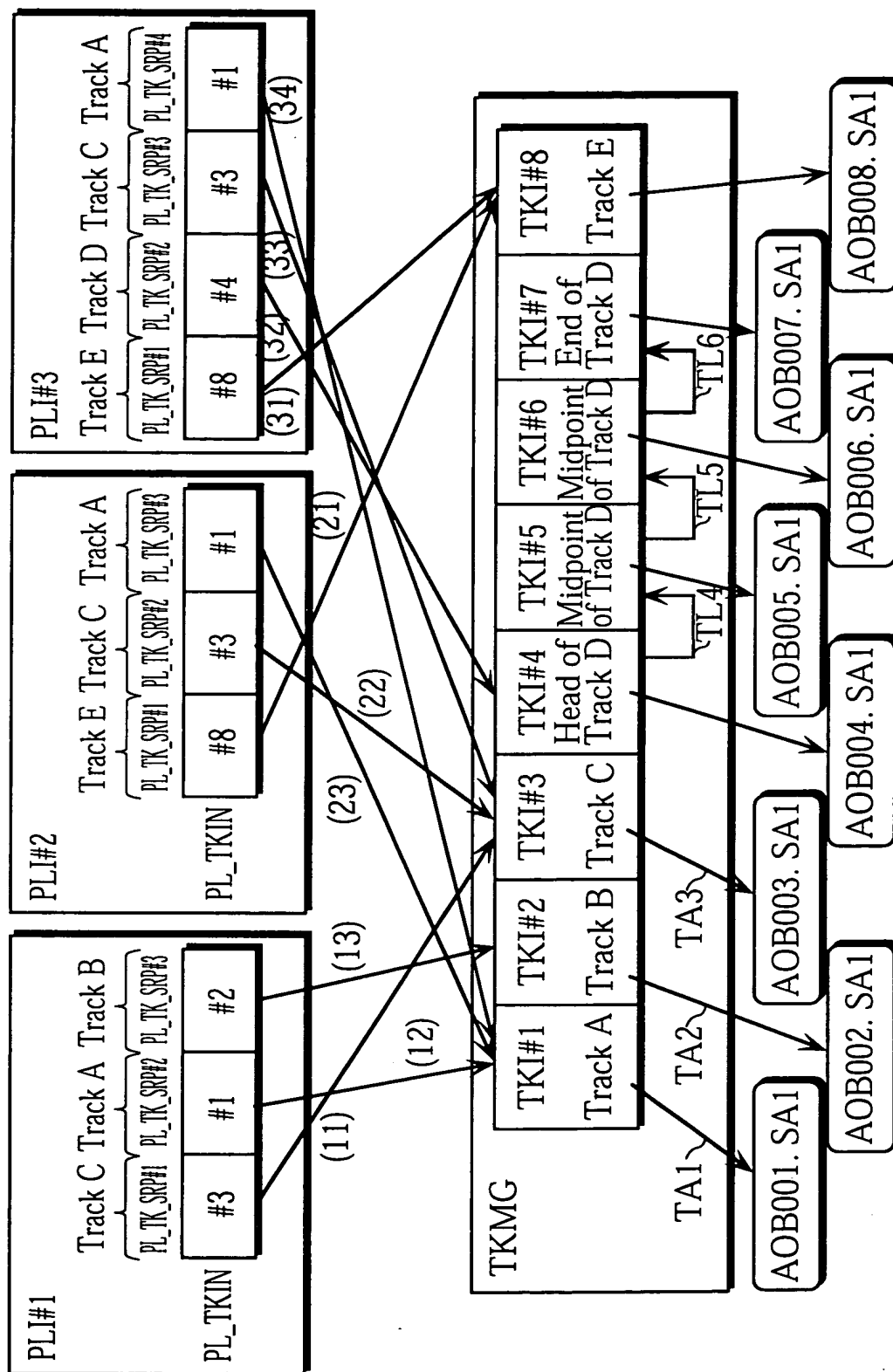


FIG. 43A

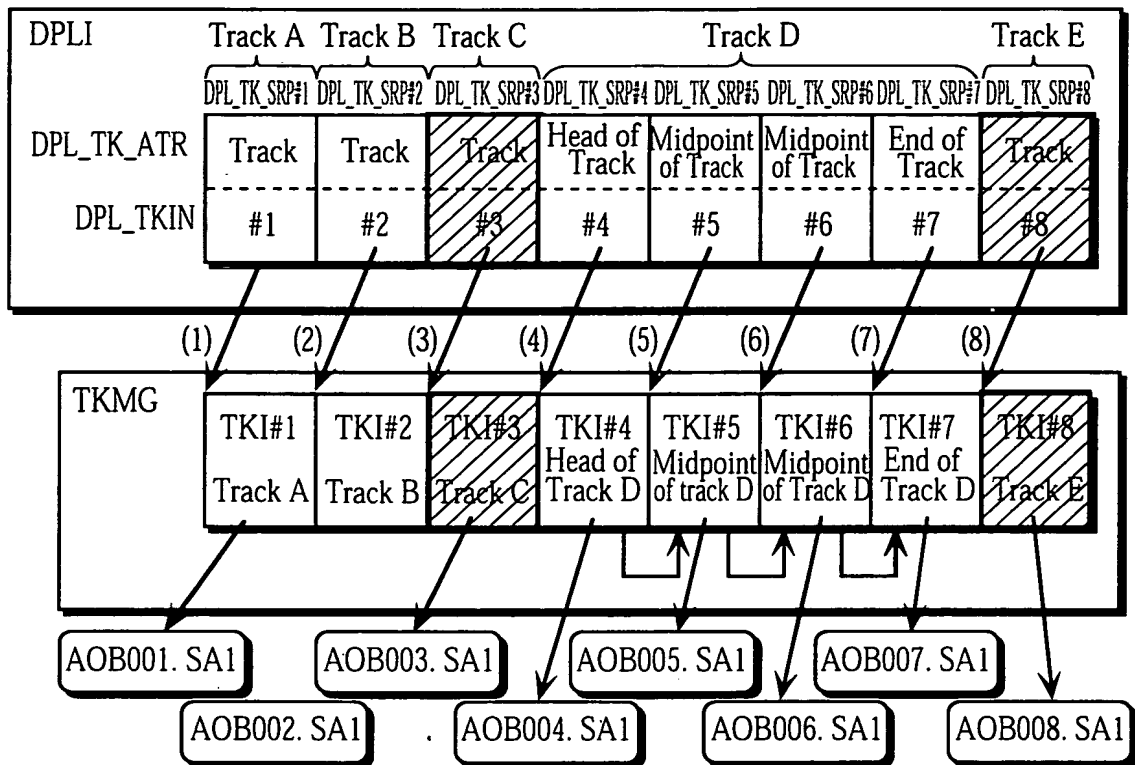


FIG. 43B

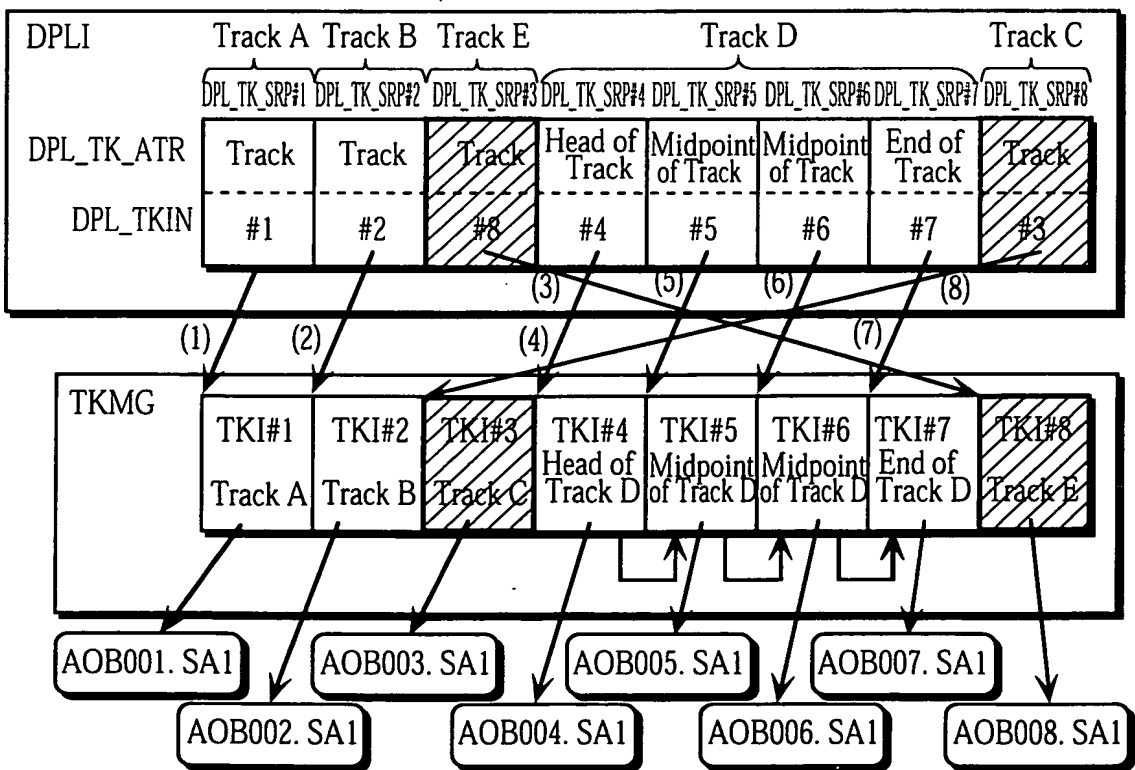


FIG. 44A

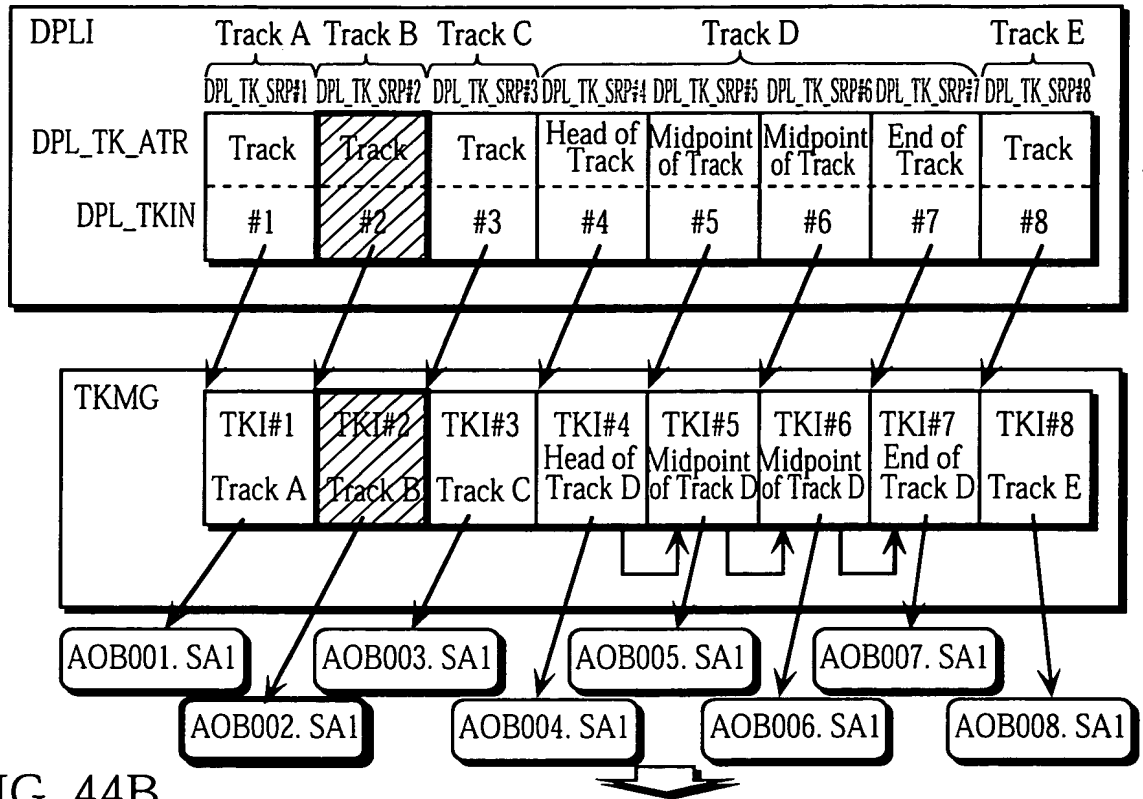


FIG. 44B

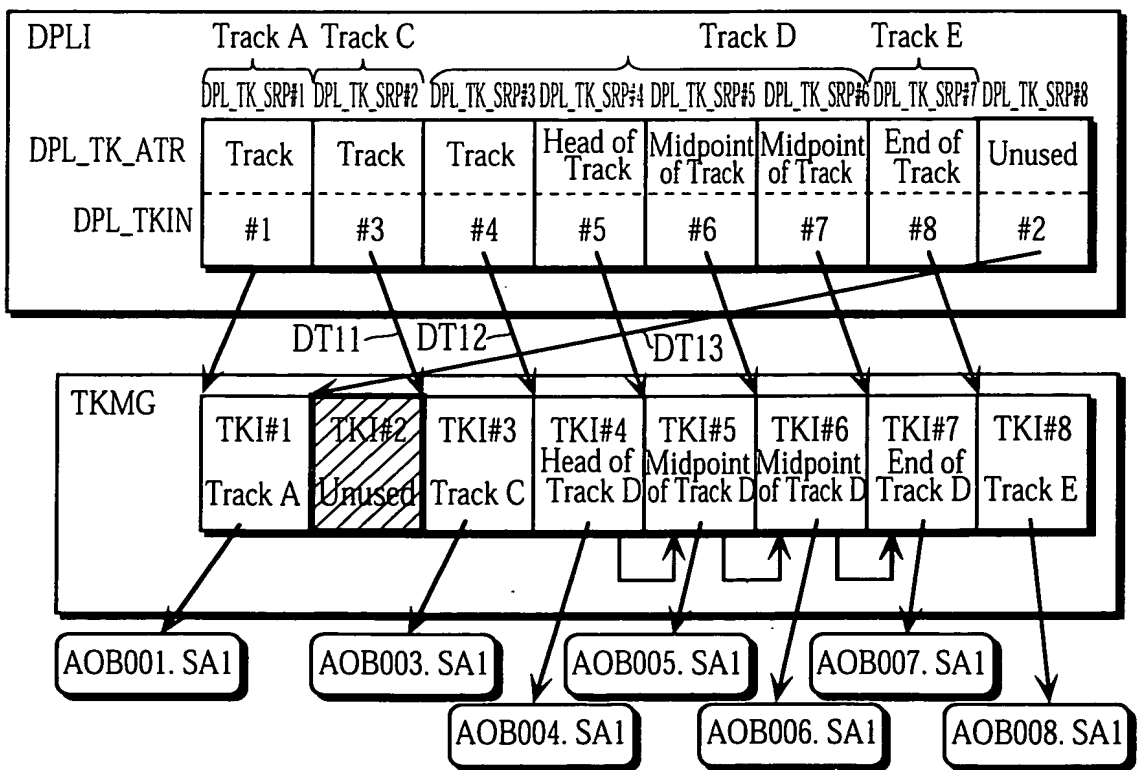


FIG. 45A

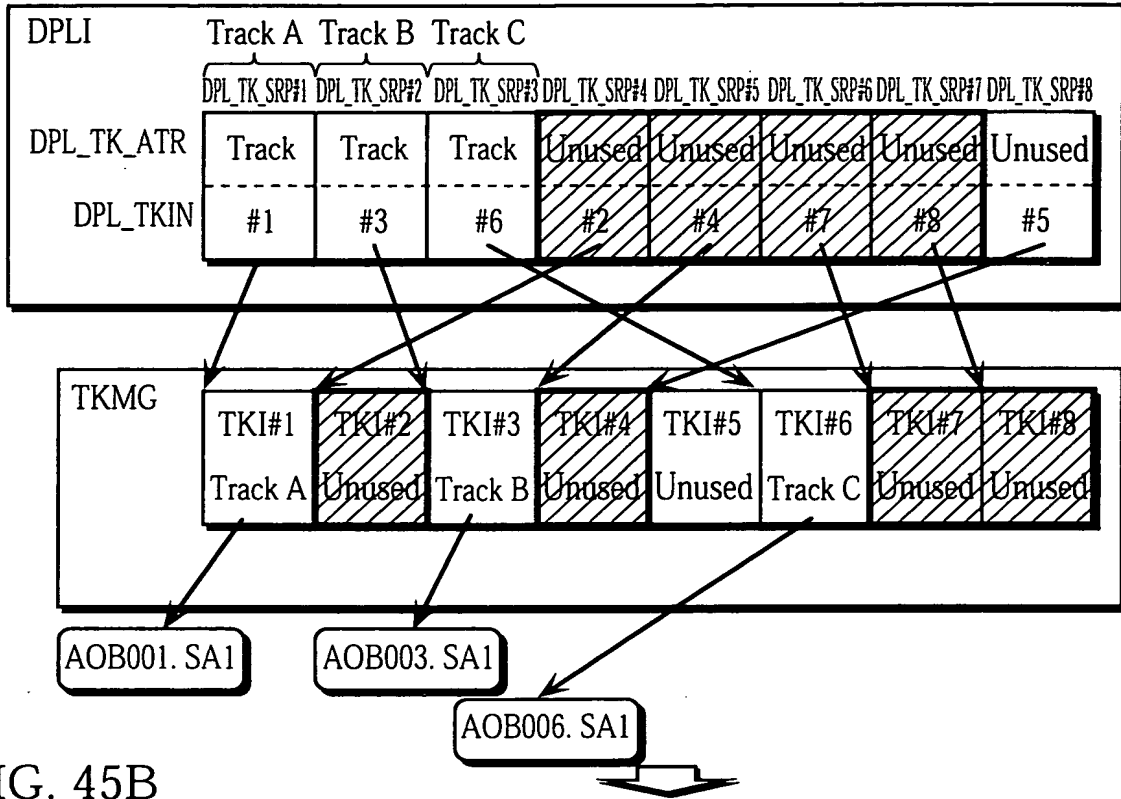


FIG. 45B

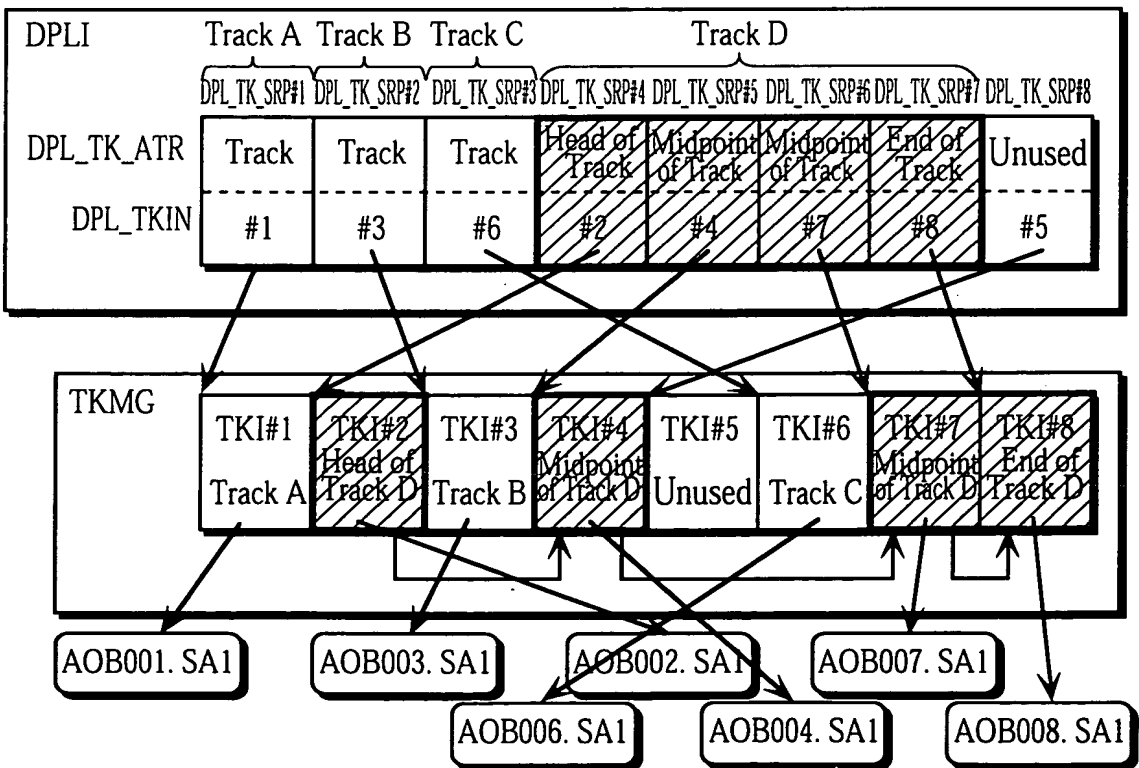


FIG. 46A

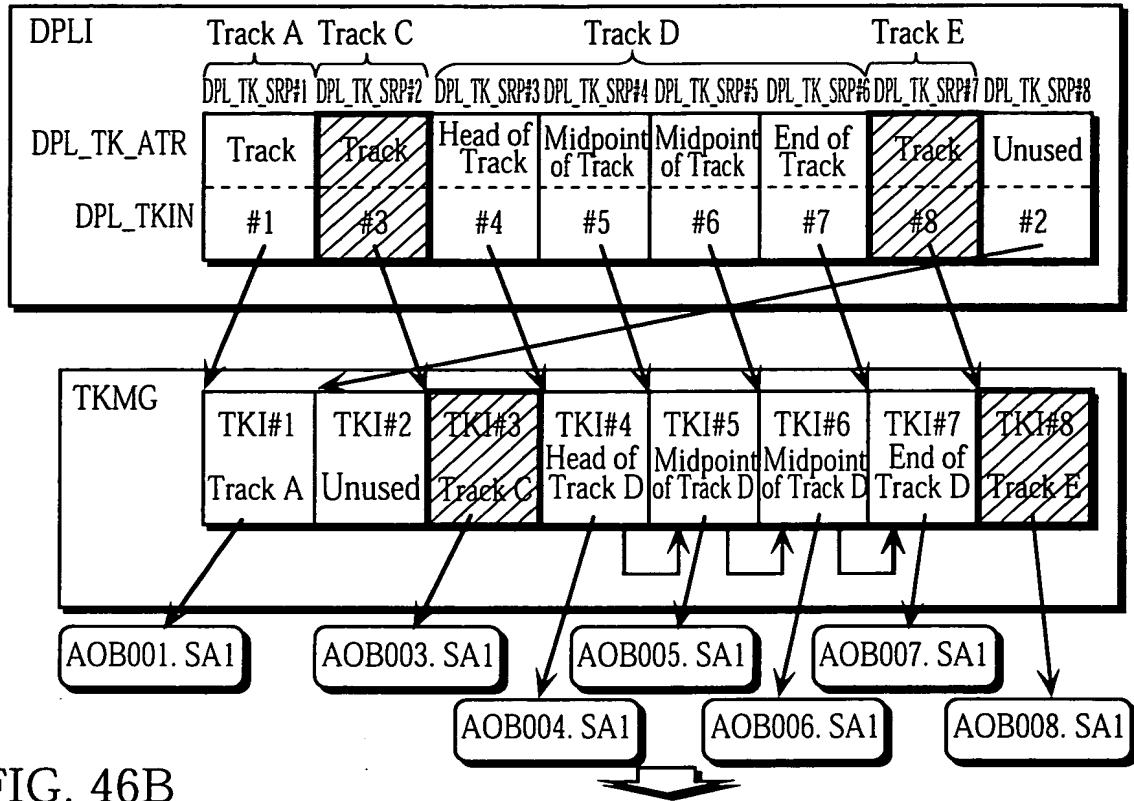


FIG. 46B

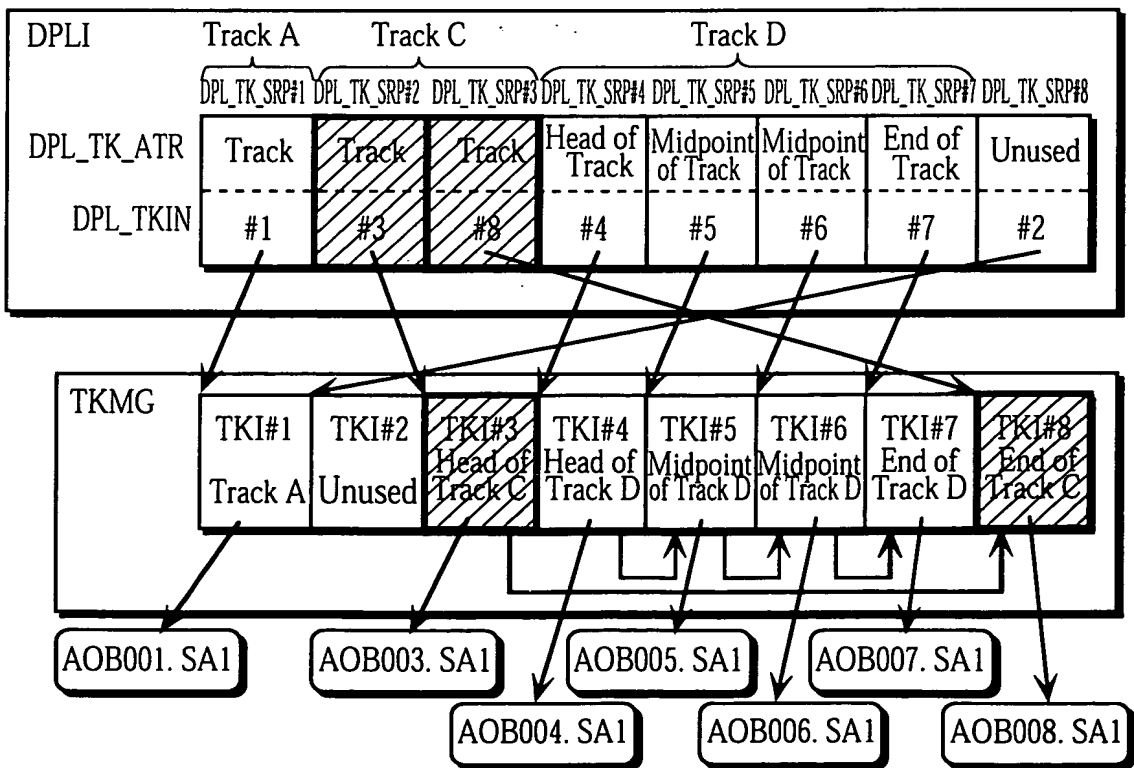


FIG. 47A

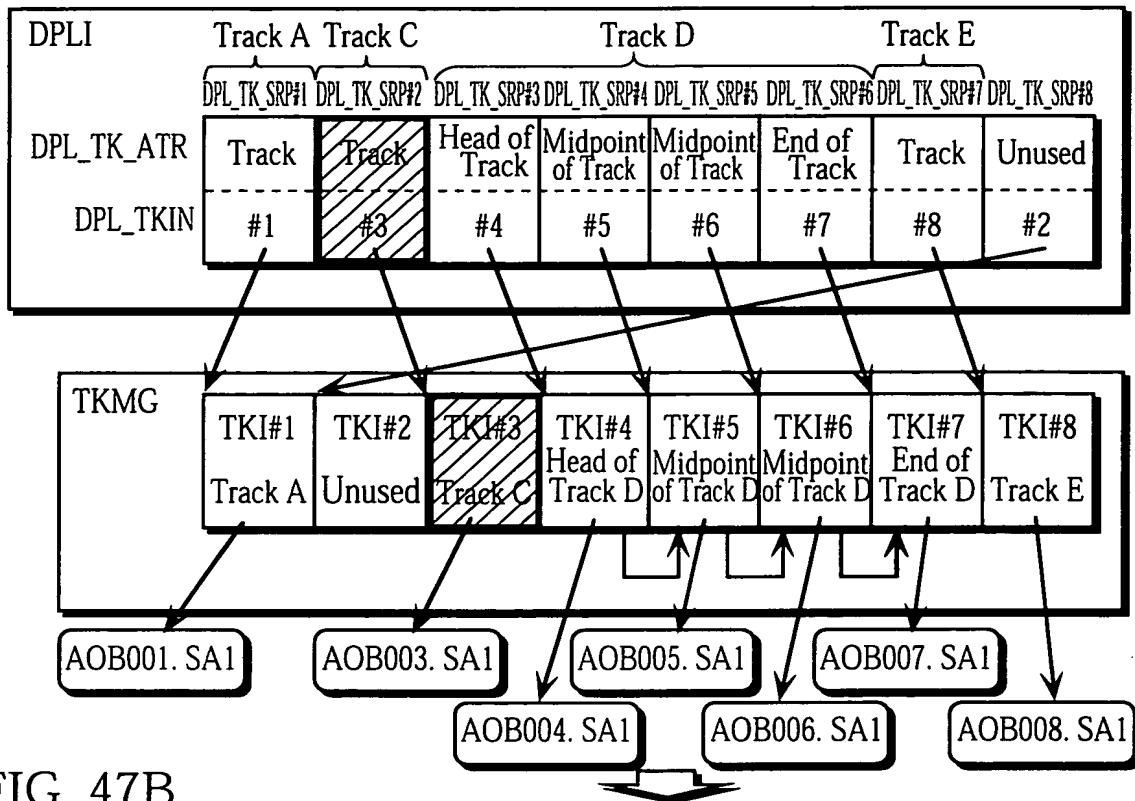


FIG. 47B

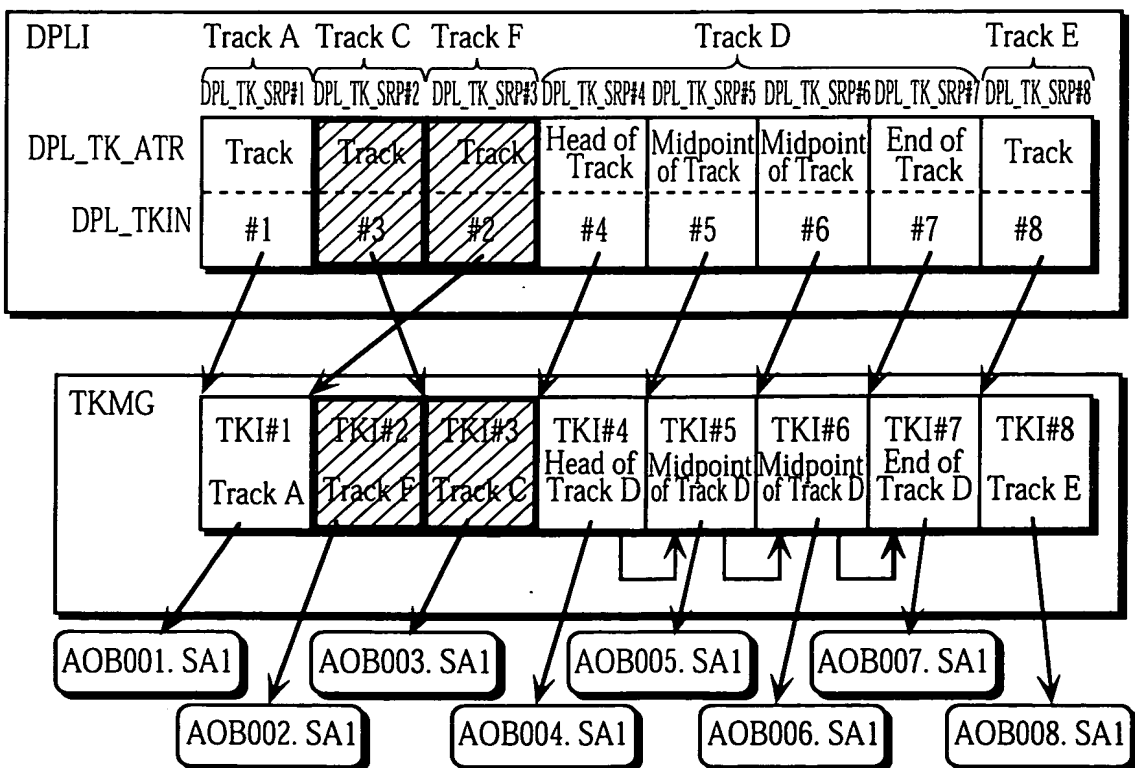


FIG. 48

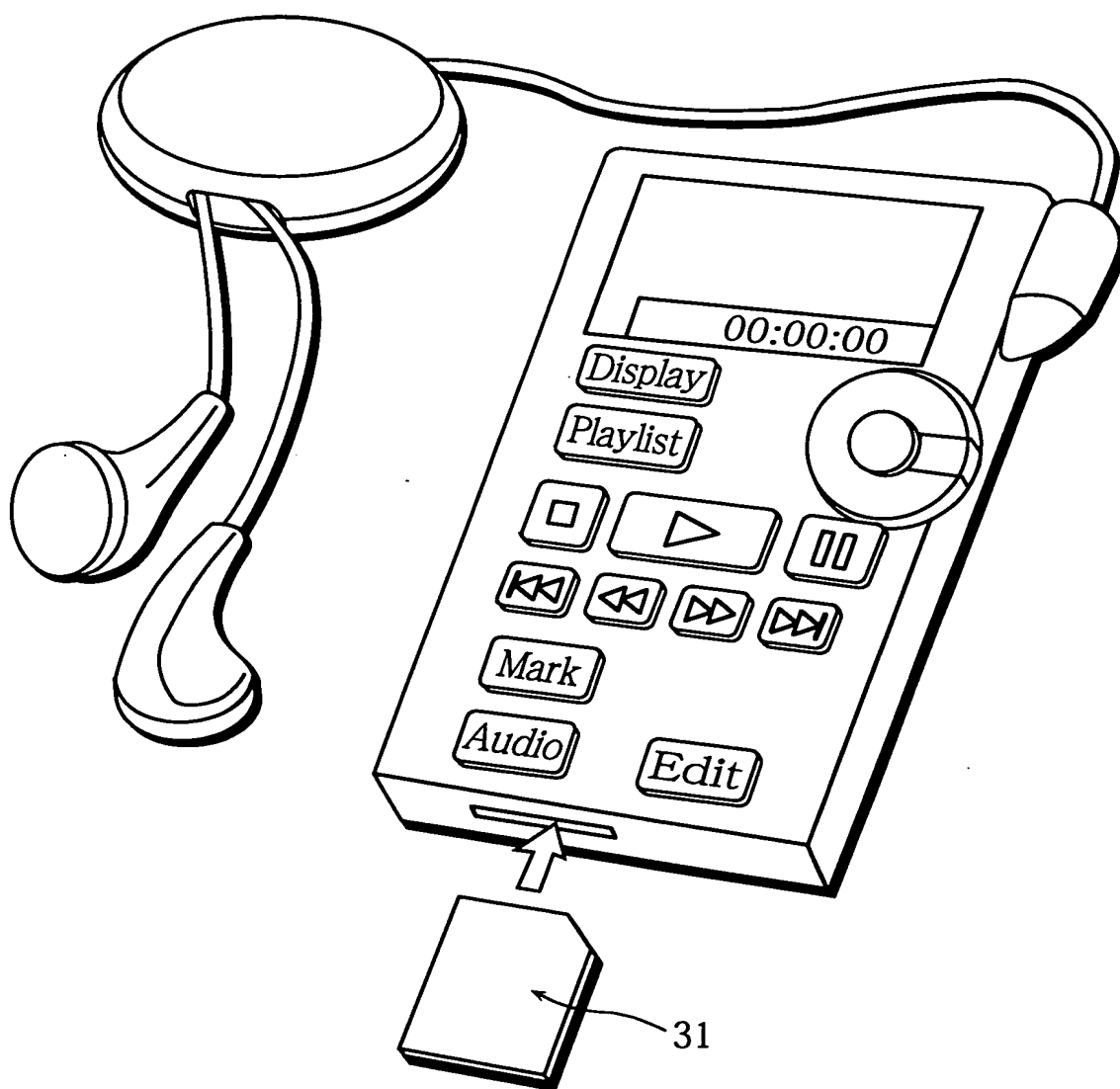


FIG. 49

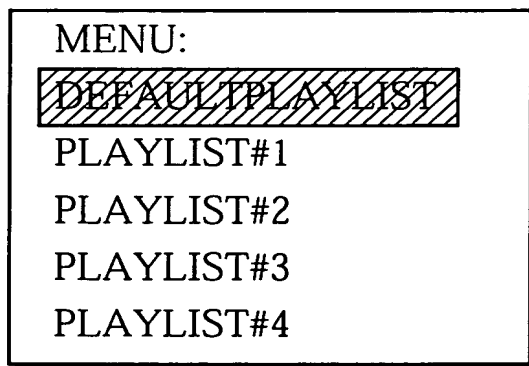


FIG. 50A

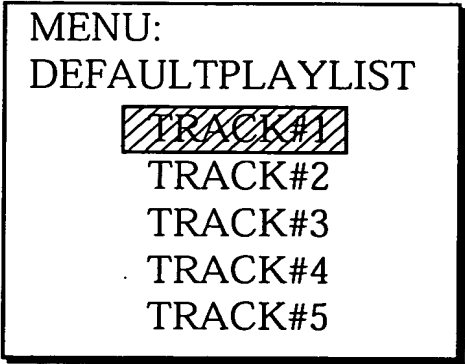


FIG. 50B

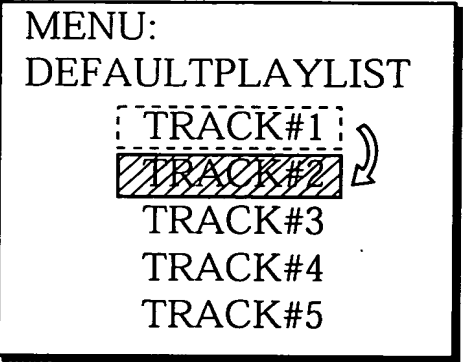


FIG. 50C

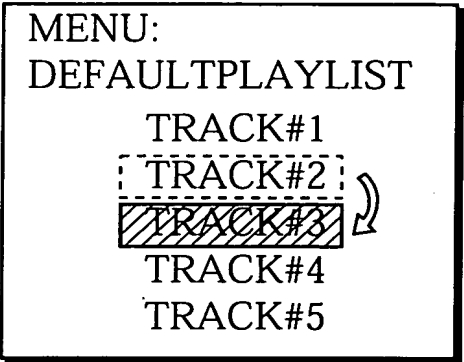


FIG. 50D

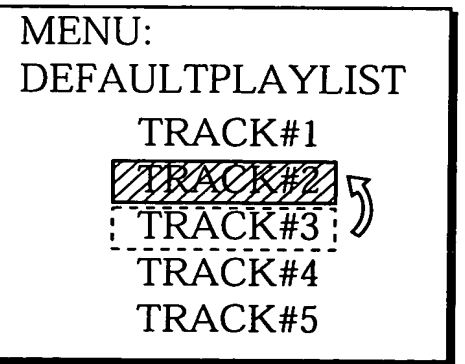
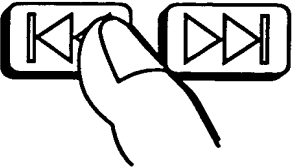
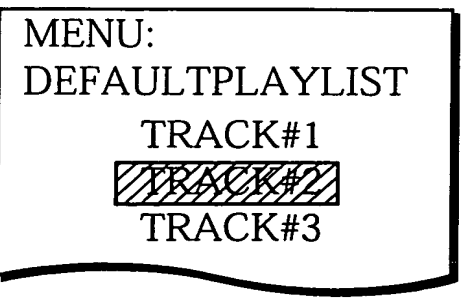


FIG. 50E



PLAY ...INDICATES THAT TRACK#2 SHOULD BE PLAYED BACK
Playlist ...INDICATES THAT TRACK#2 SHOULD BE EDITED

FIG. 51A

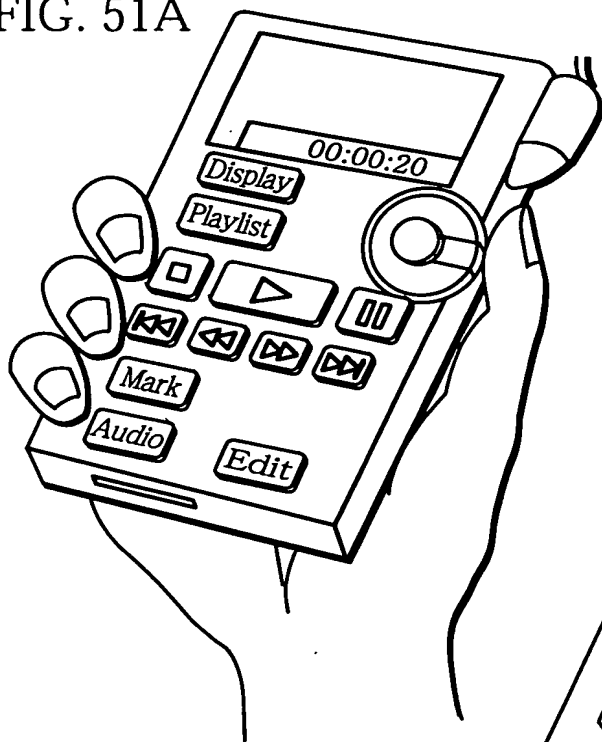


FIG. 51C

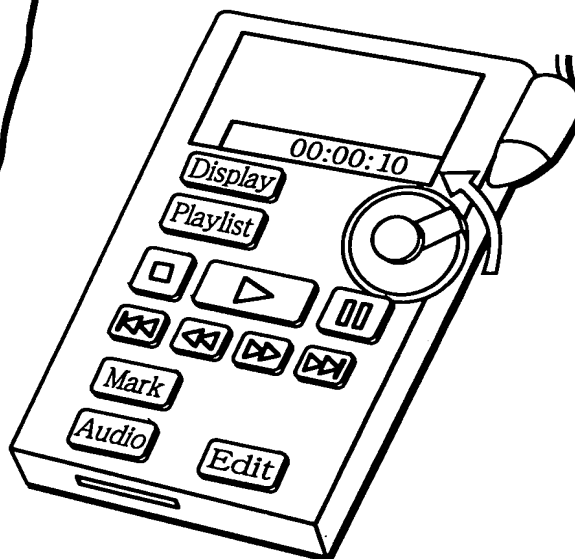
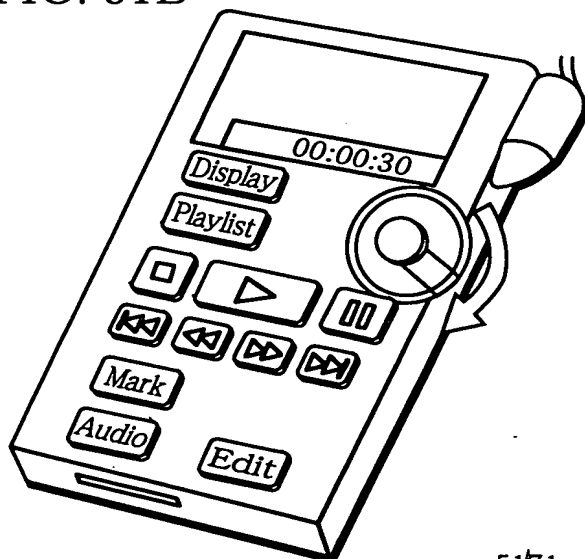


FIG. 51B



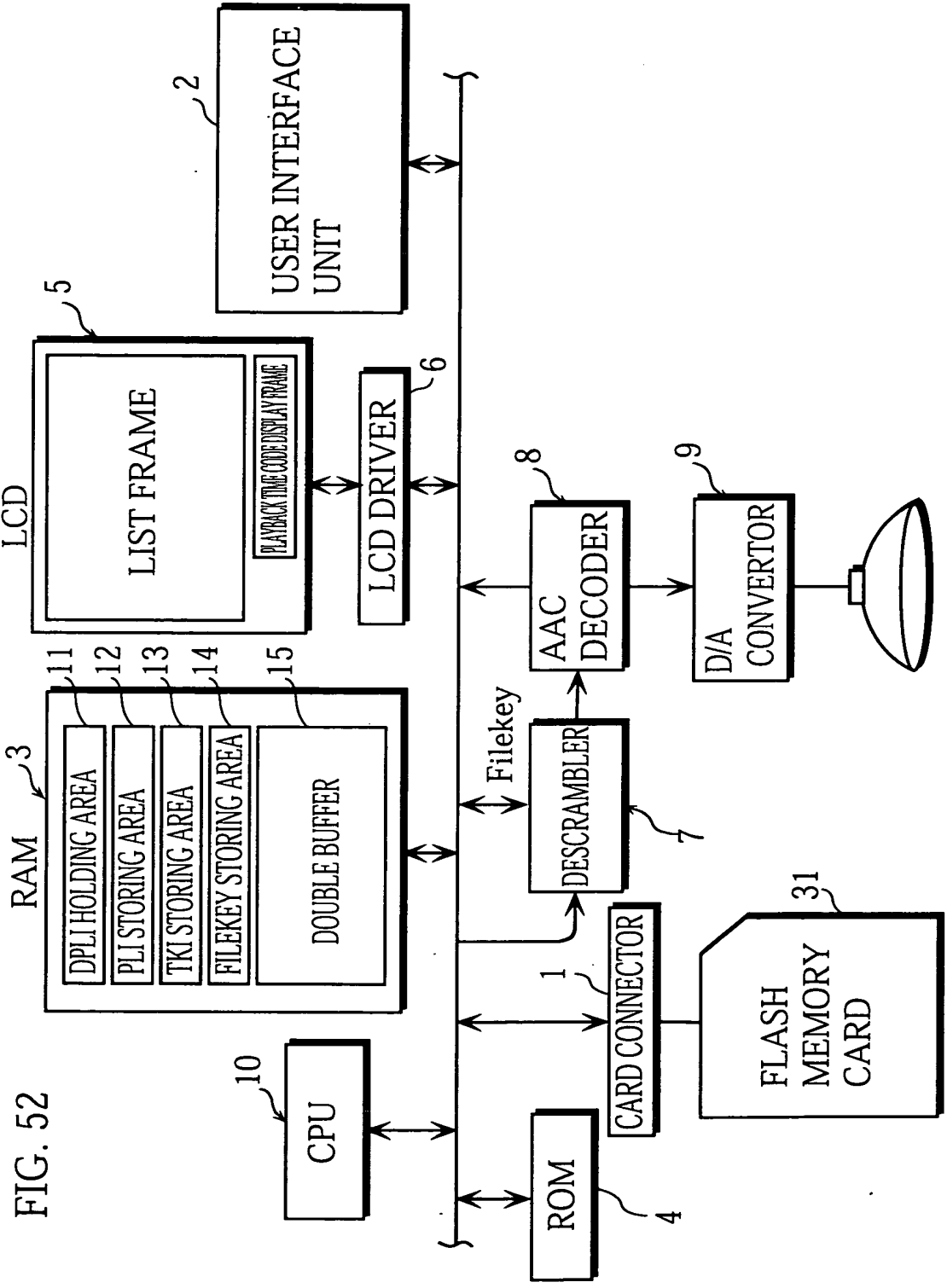
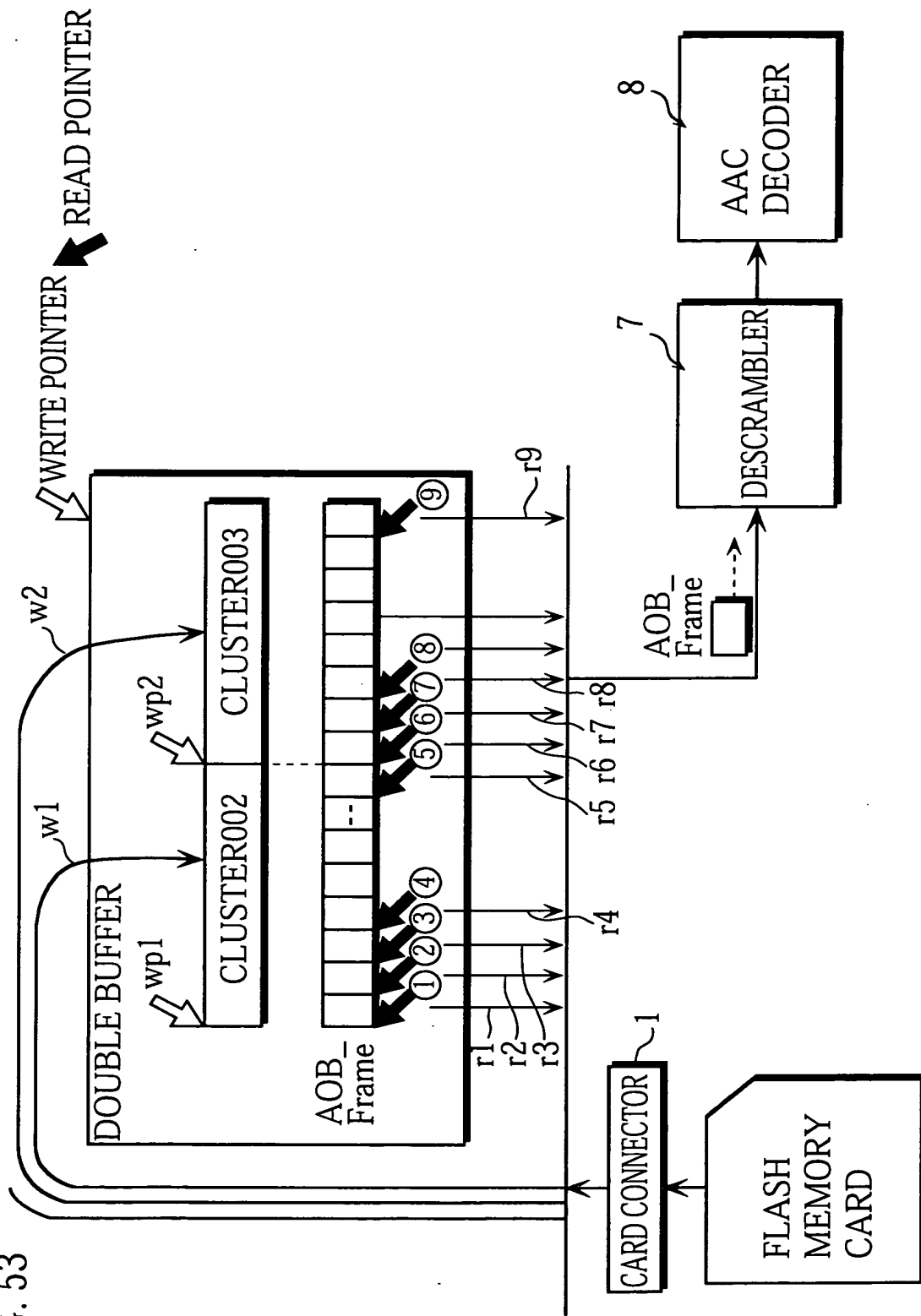


FIG. 52

FIG. 53



09580601-052600

FIG. 54A

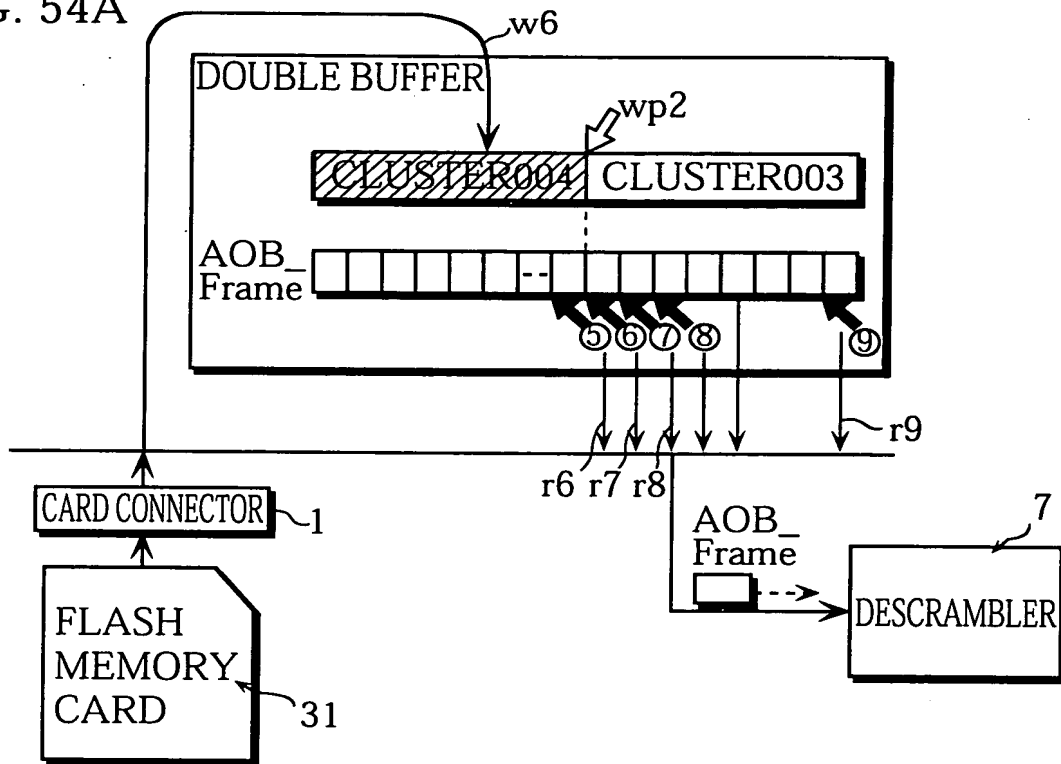


FIG. 54B

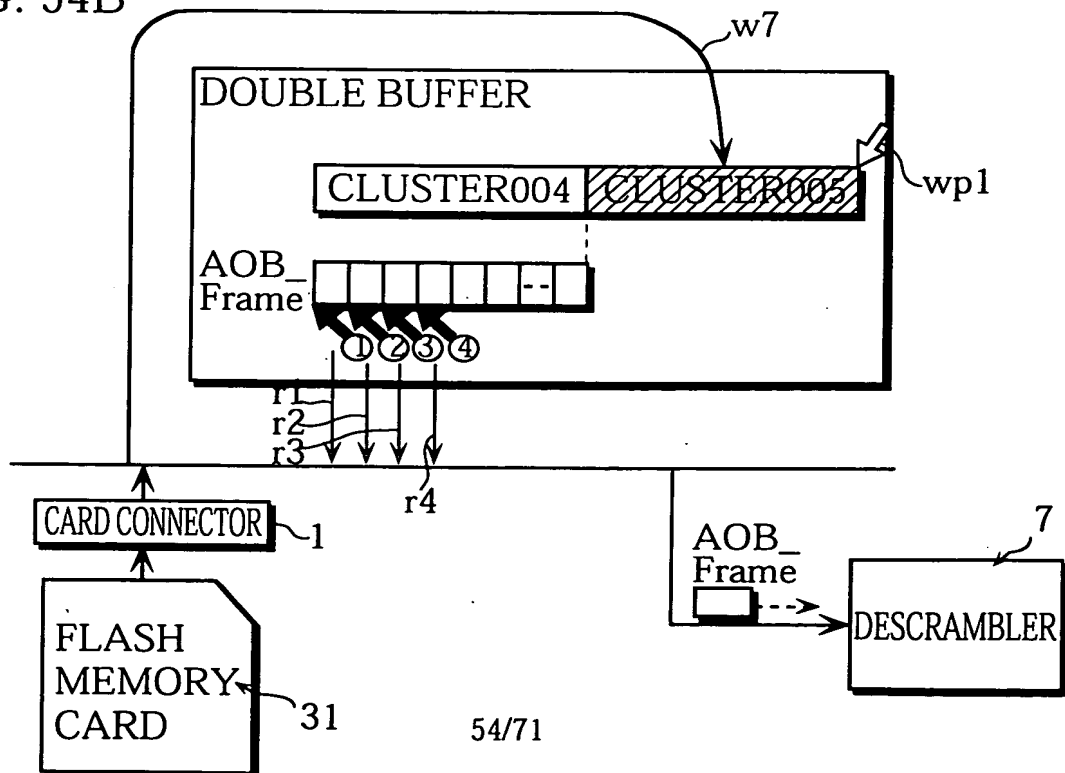
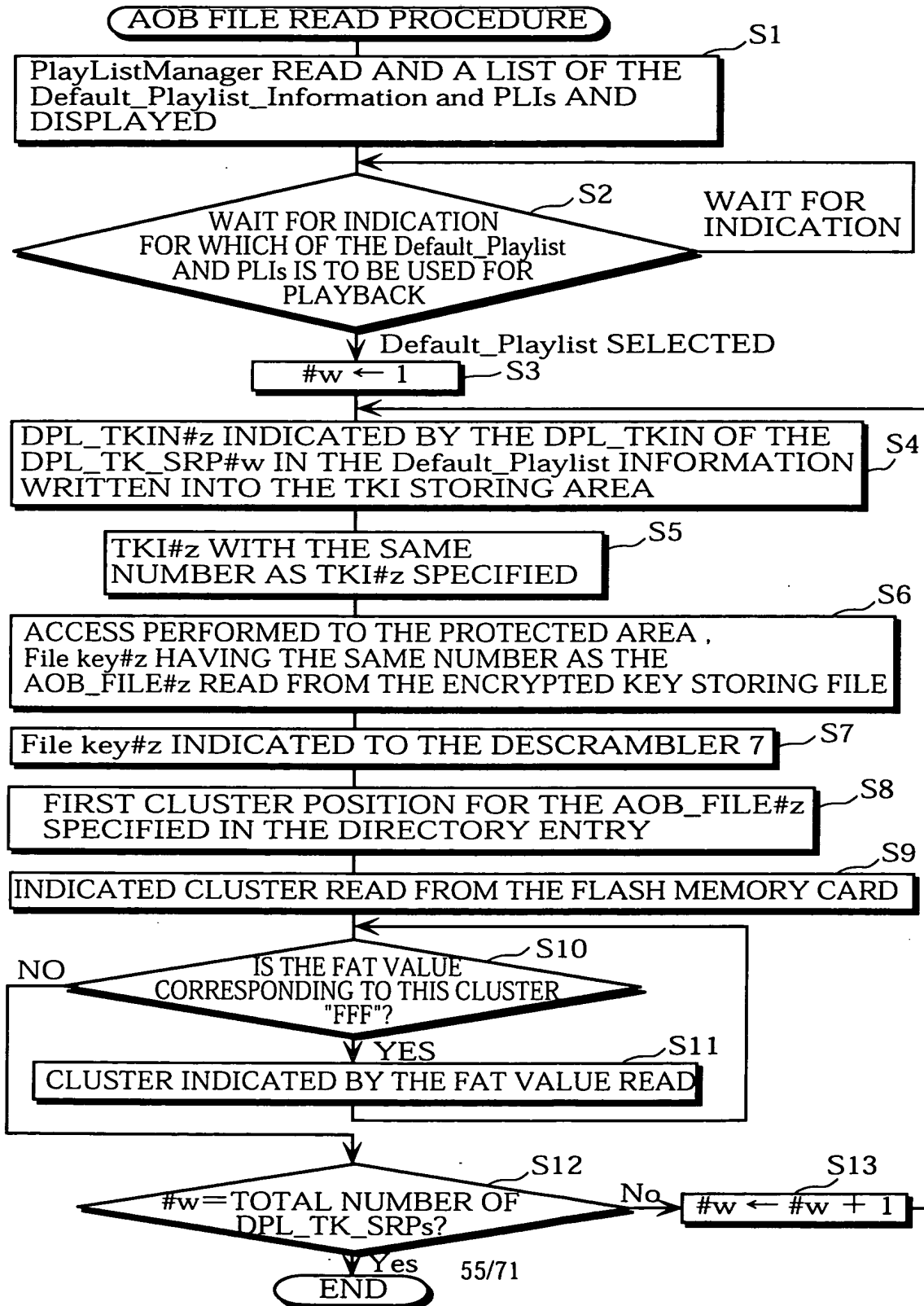


FIG. 55



009250" T0908560

FIG. 56

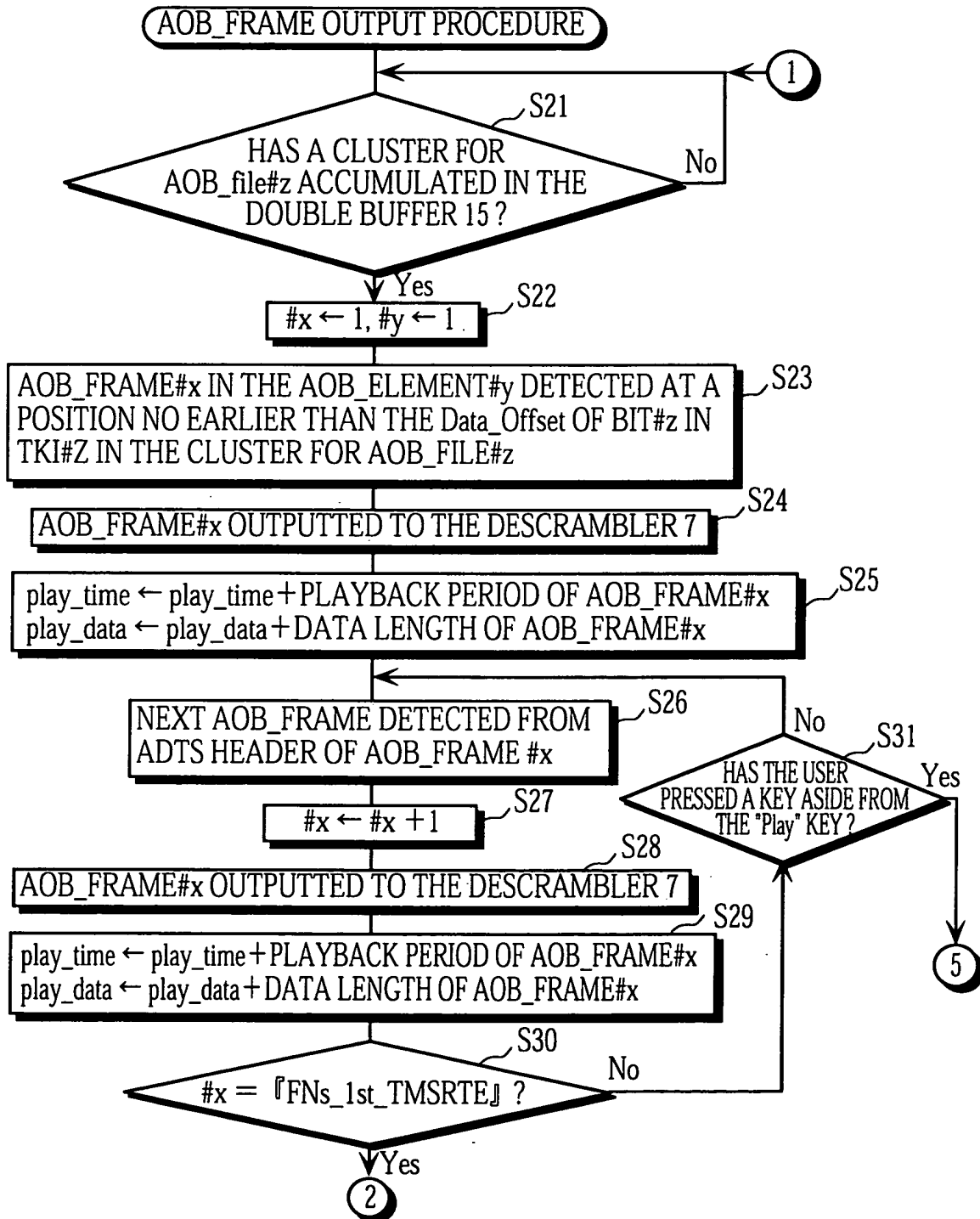


FIG. 57

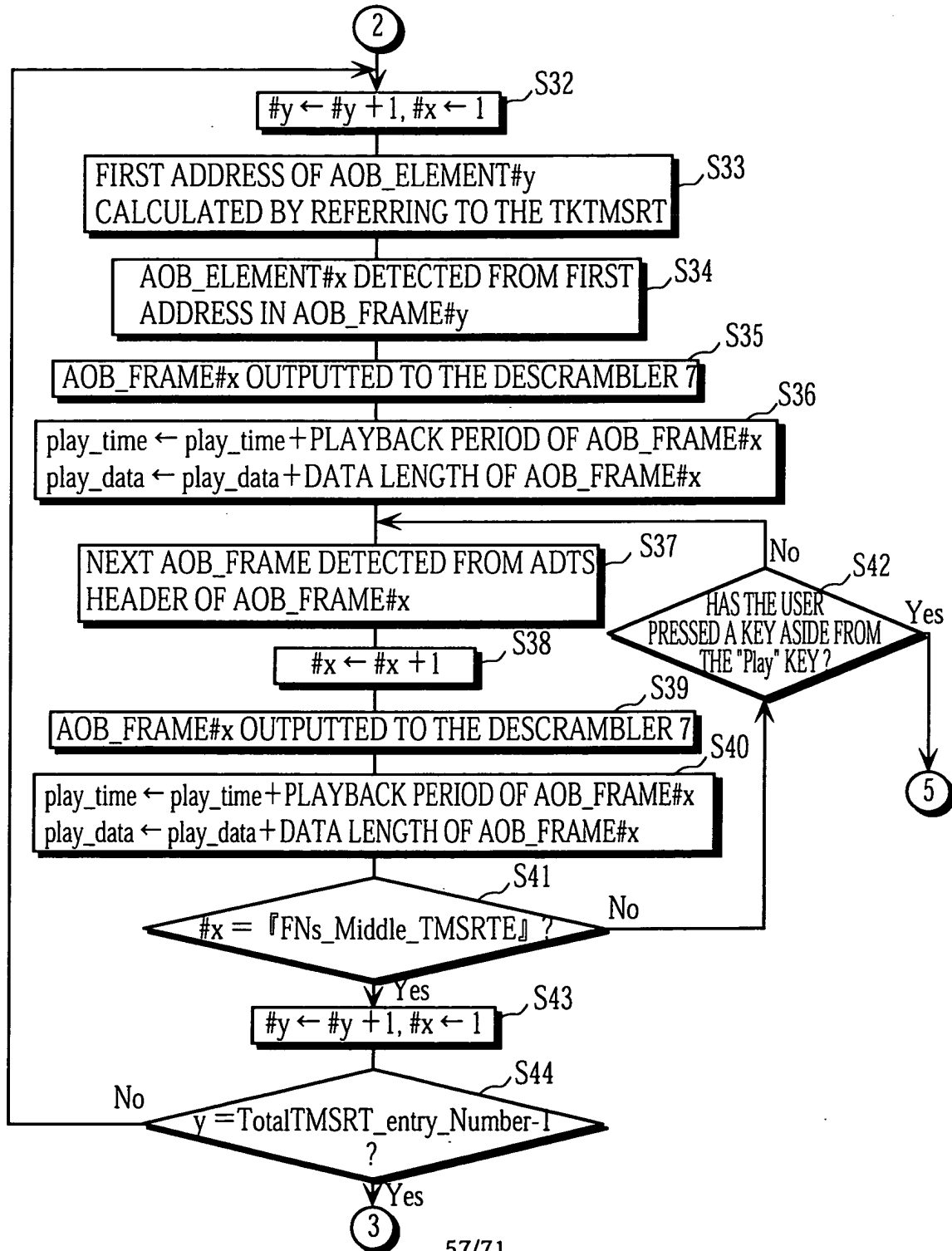


FIG. 58

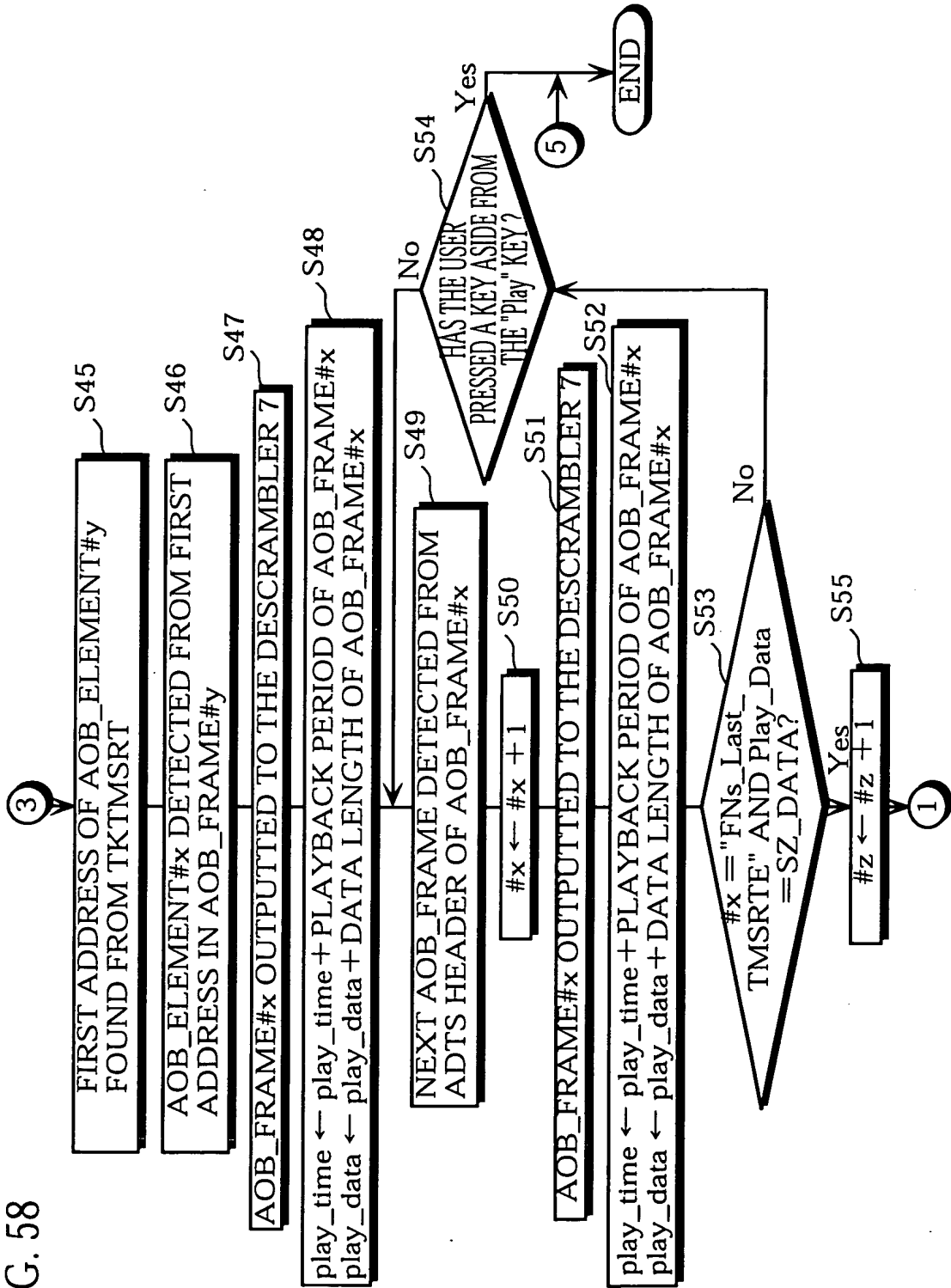
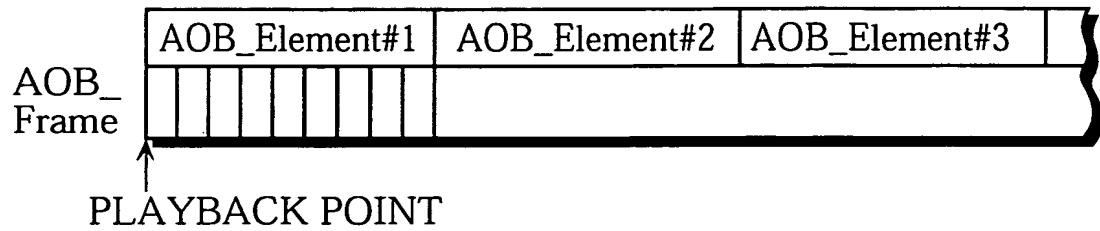
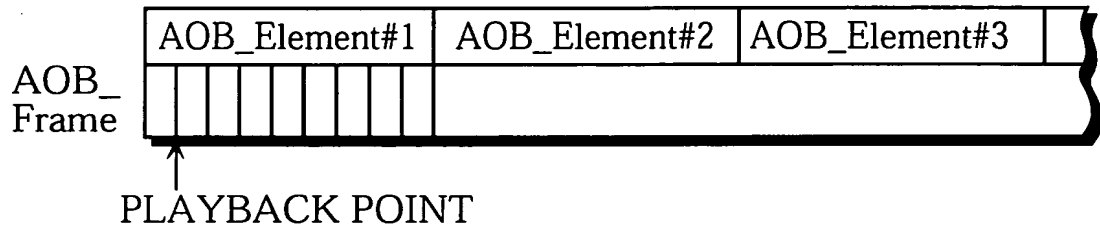


FIG. 59A



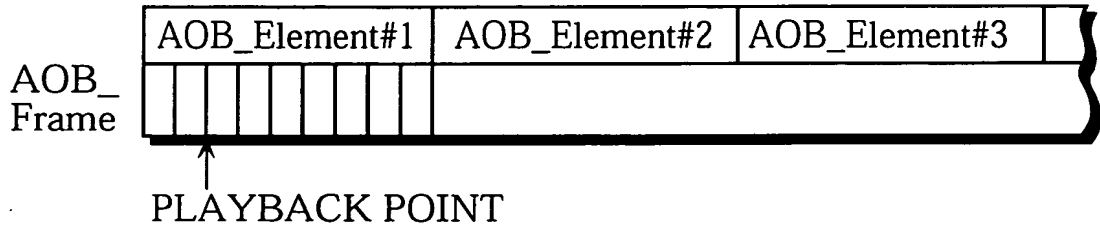
PLAYBACK TIME CODE=00:00:00. 000

FIG. 59B



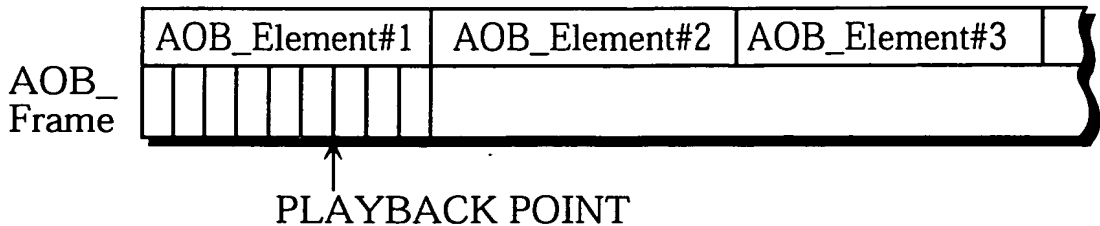
PLAYBACK TIME CODE=00:00:00. 020

FIG. 59C



PLAYBACK TIME CODE=00:00:00. 040

FIG. 59D



PLAYBACK TIME CODE=00:00:00. 120

FIG. 60

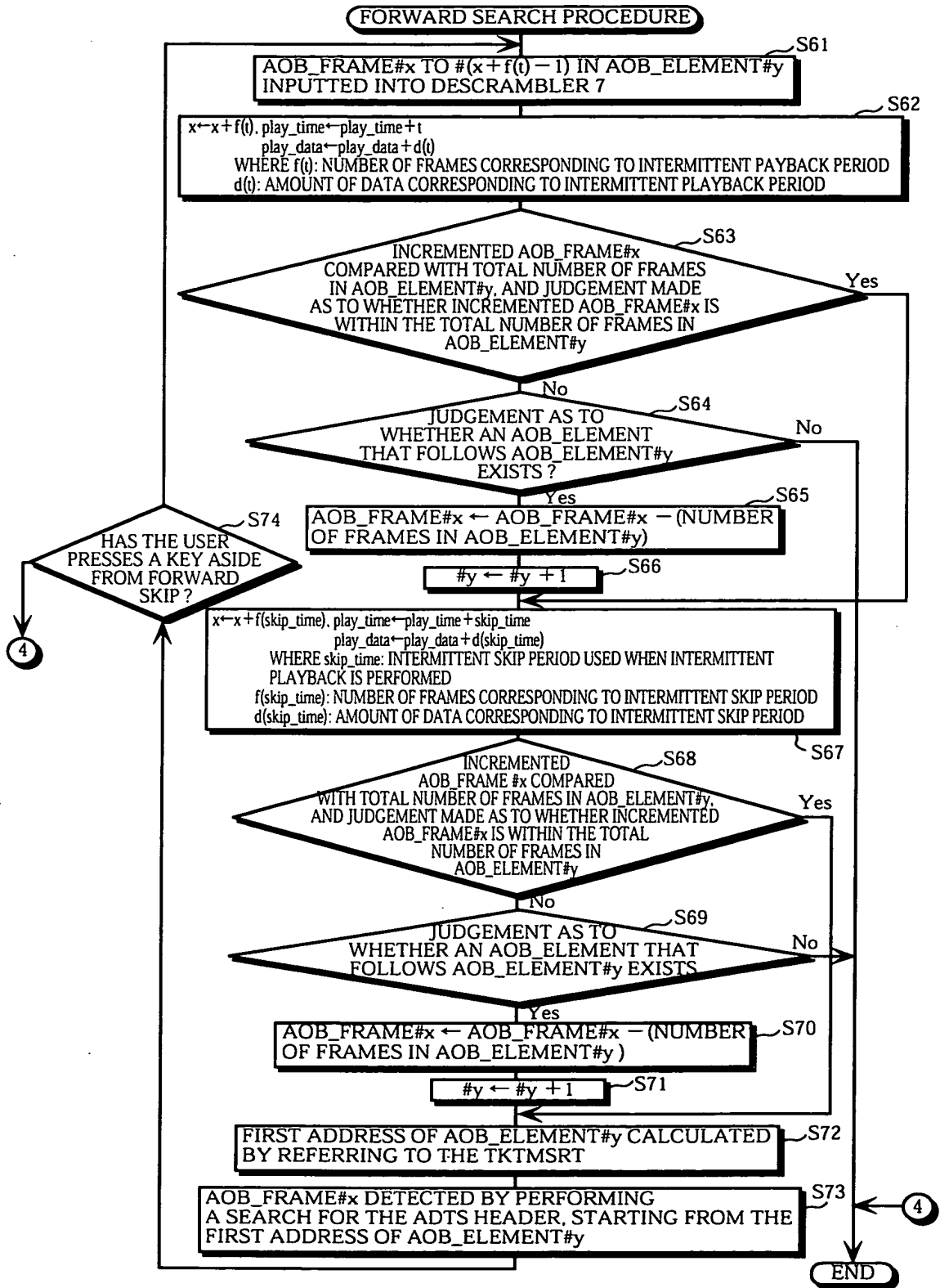


FIG. 61A

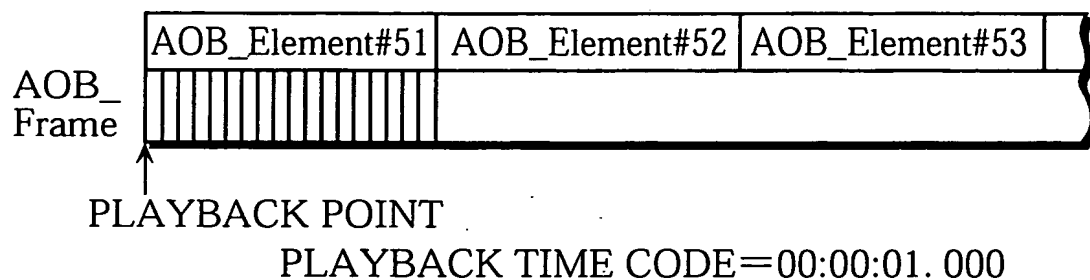


FIG. 61B

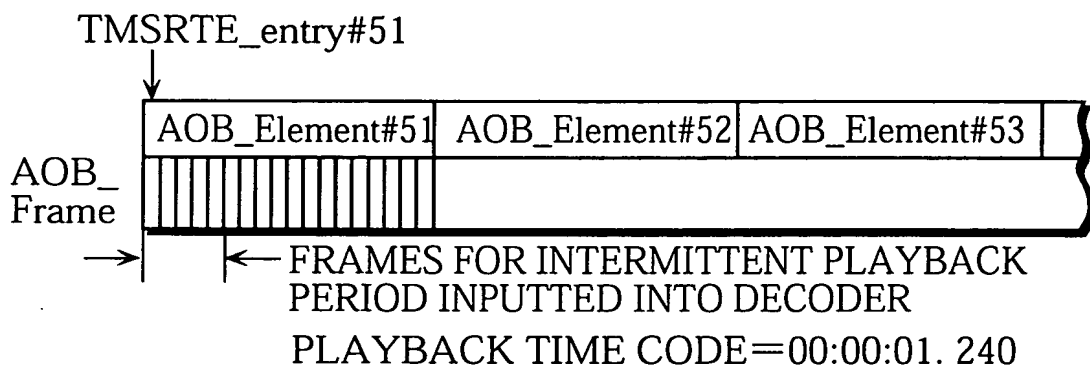


FIG. 61C

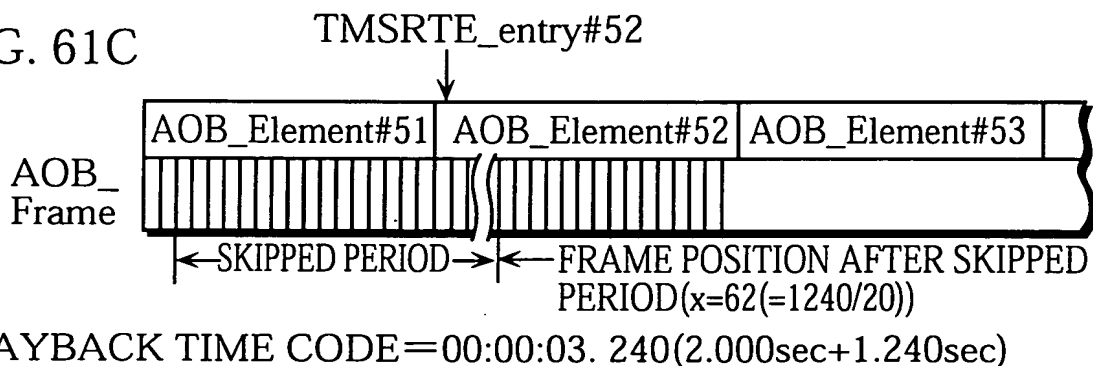


FIG. 61D

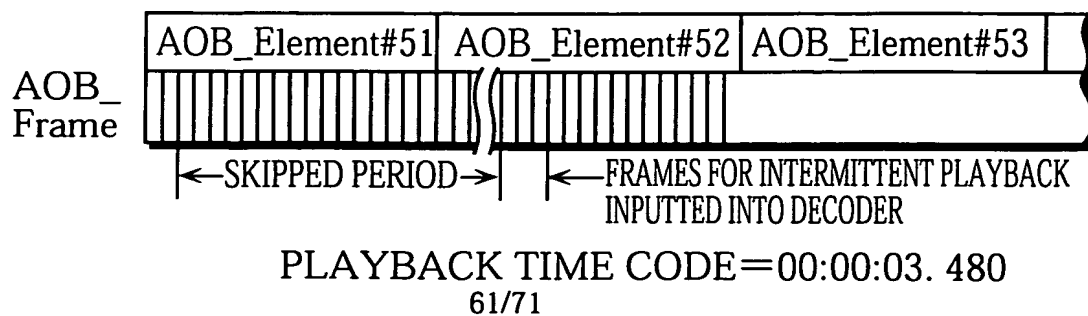


FIG. 62A

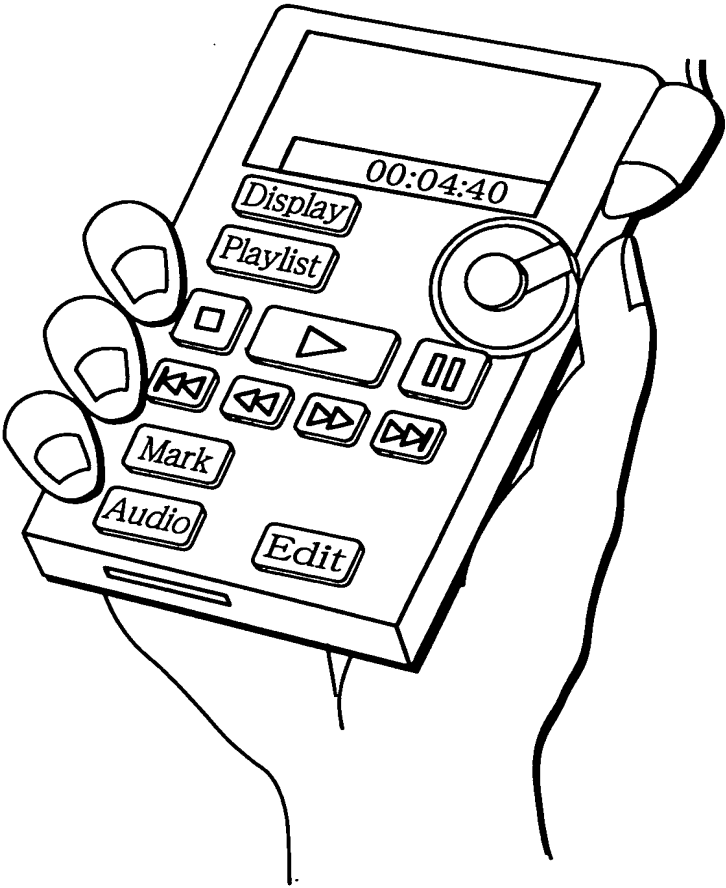


FIG. 62B

BIT	FNs_1st_TMSRTE	80
	FNs_Last_TMSRTE	50
	FNs_Middle_TMSRTE	94



PLAYBACK TIME CODE=00:04:40 (=280sec)
 $280\text{sec} = (80(= \text{FNs_1st_TMSRTE}) + 148 \times 94$
 $(= \text{FNs_Middle_TMSRTE}) + 8 \times 20\text{msec}$
 62/71

FRAME POSITION
 AT WHICH PLAYBACK
 SHOULD START

FIG. 63

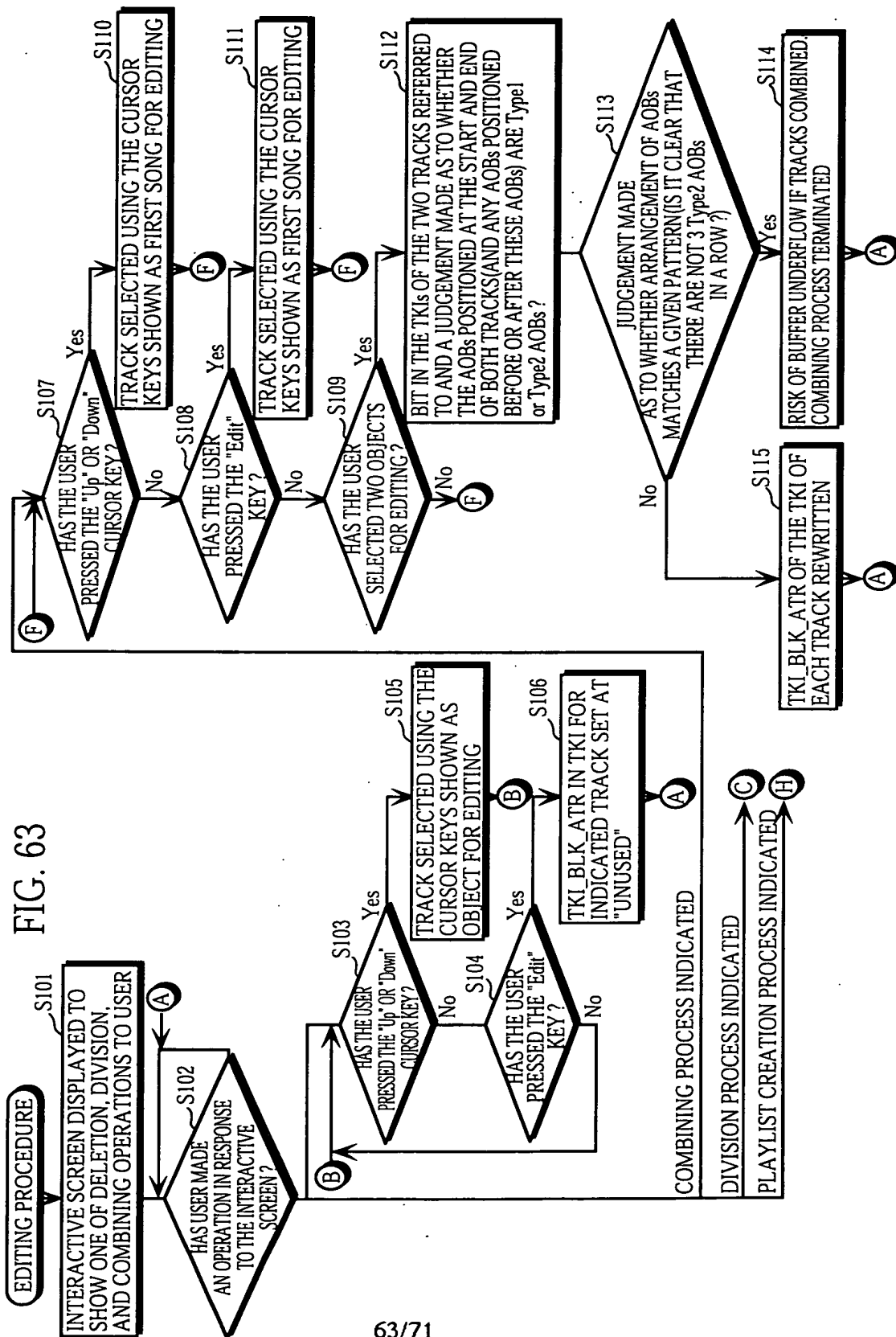


FIG. 64

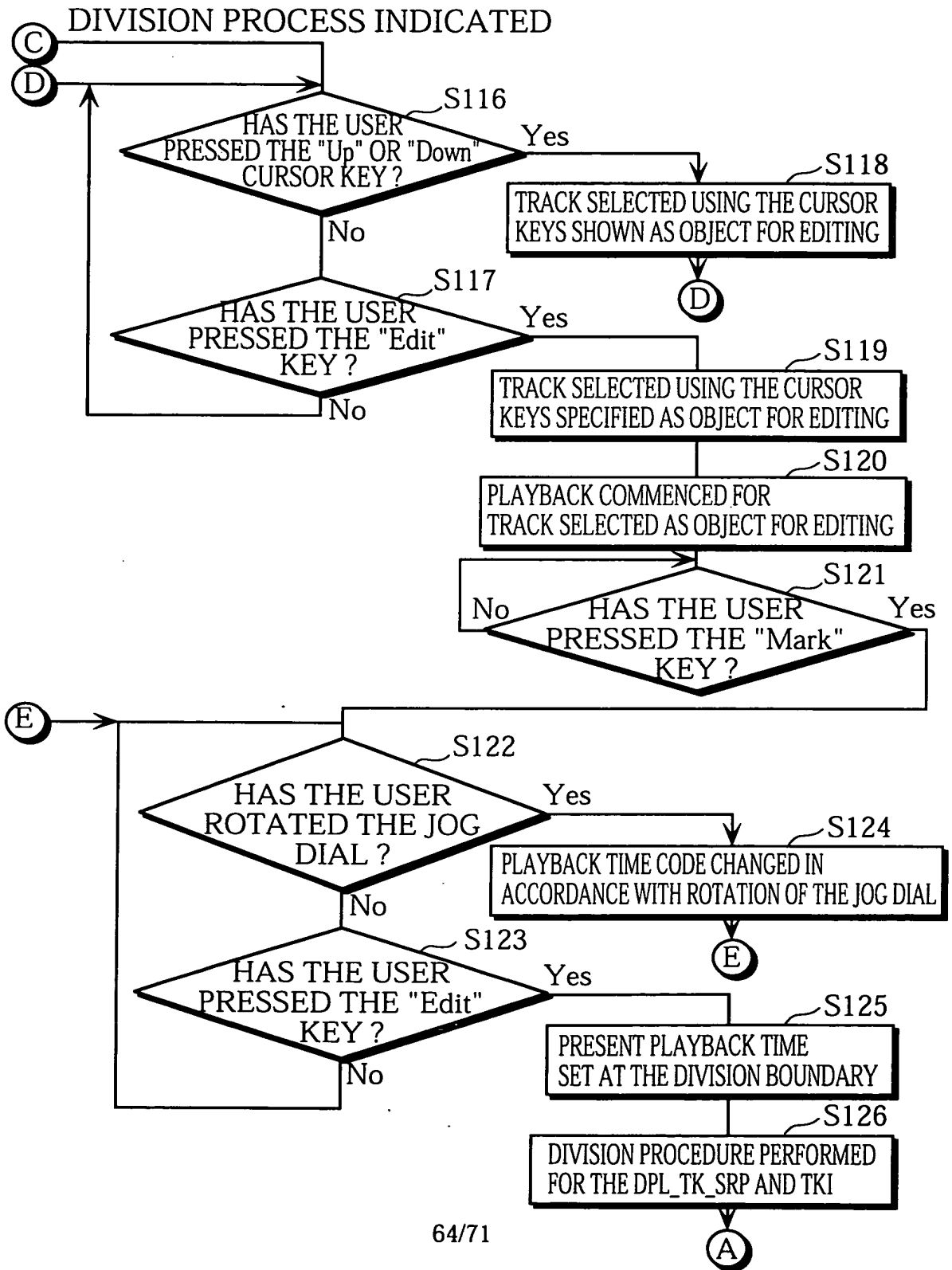
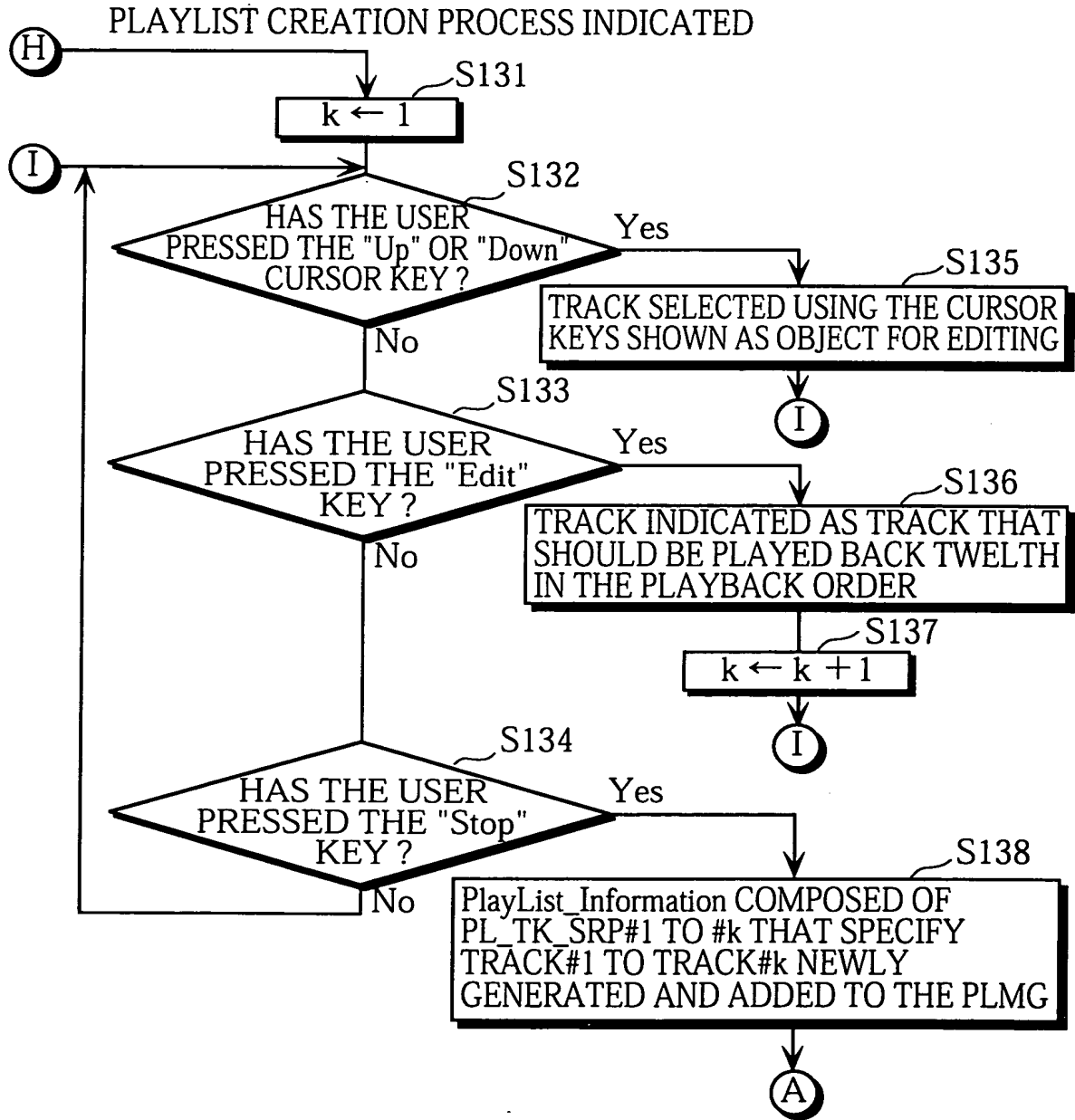


FIG. 65



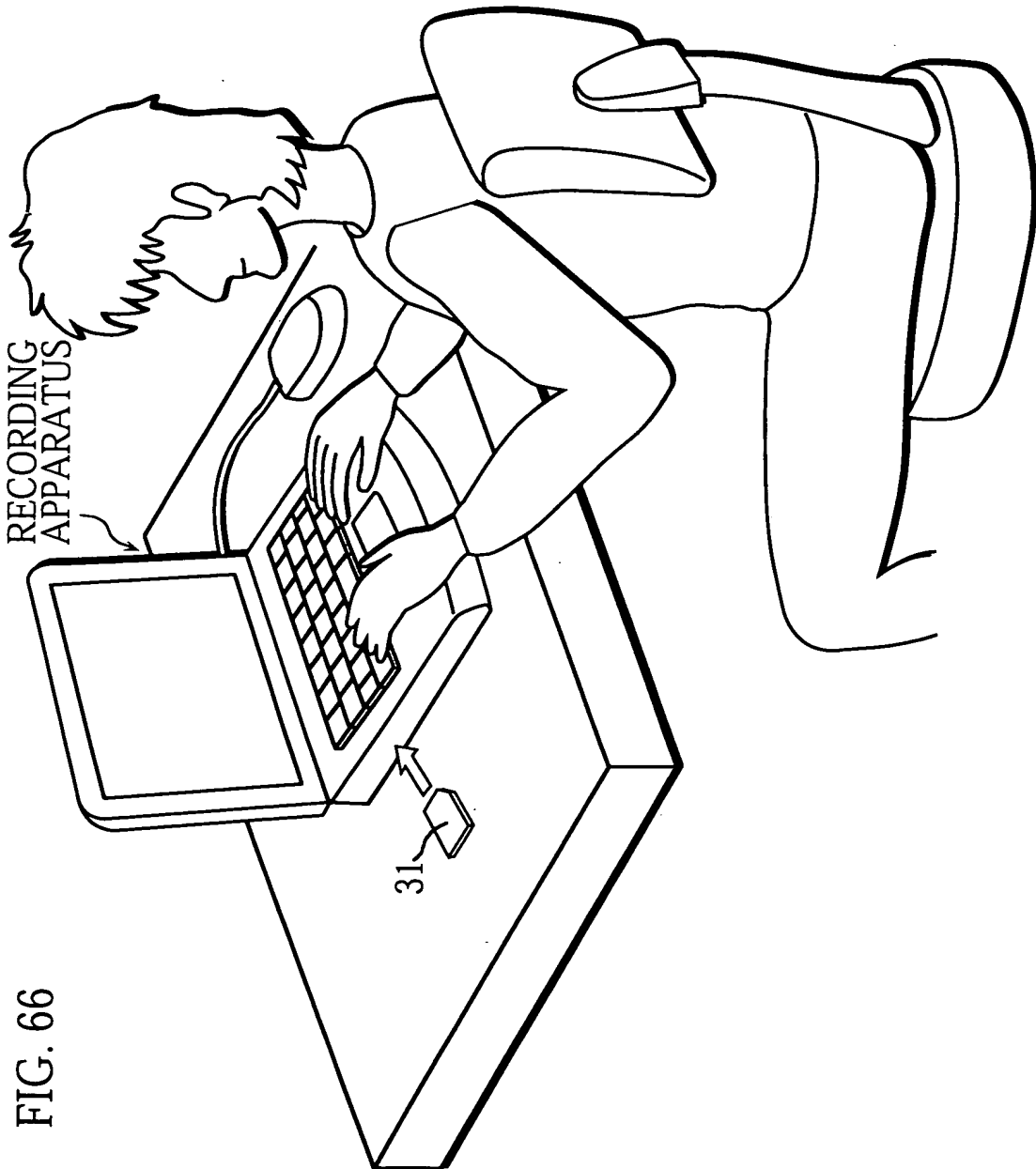


FIG. 66

FIG. 67

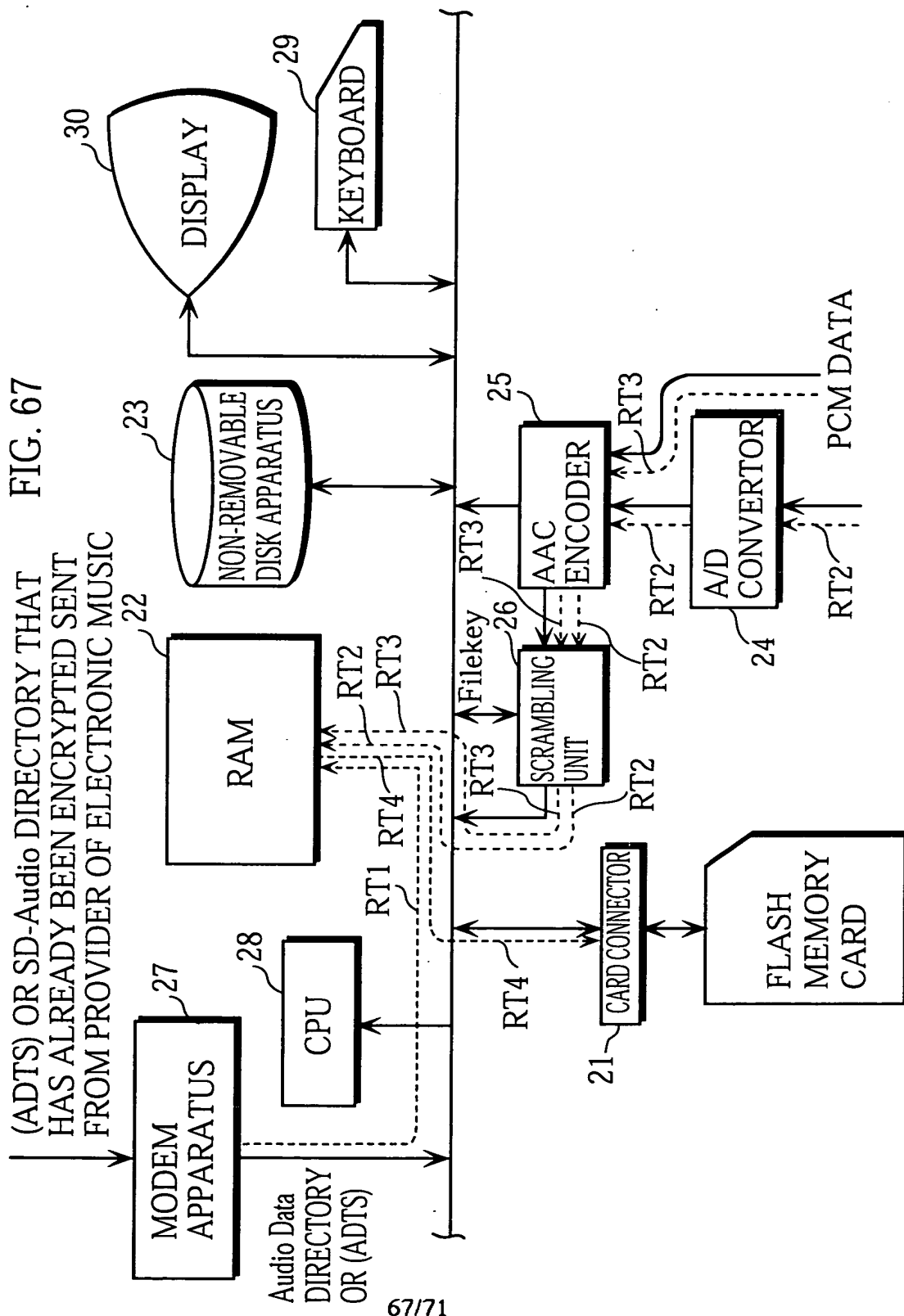


FIG. 68

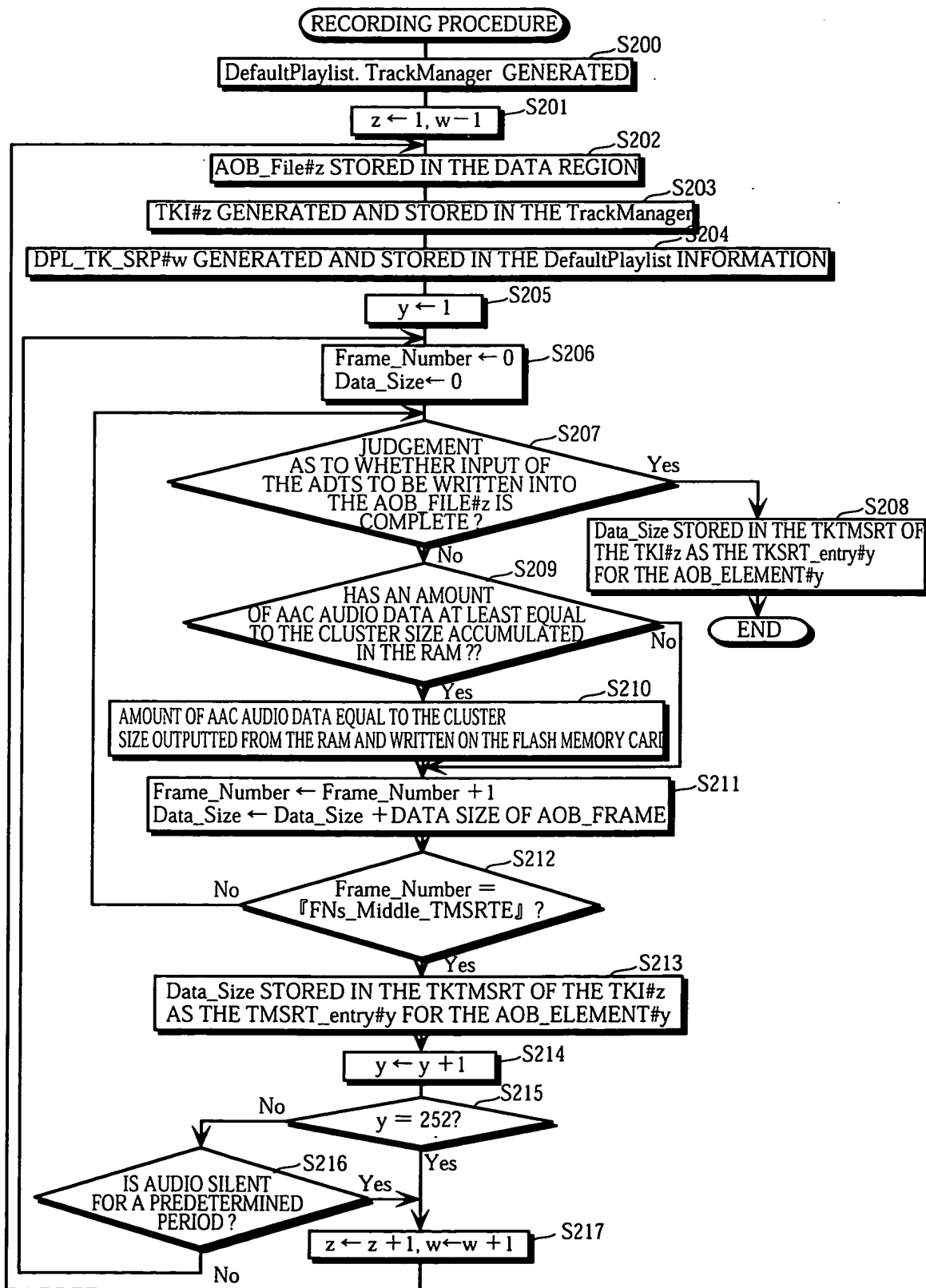


FIG. 69

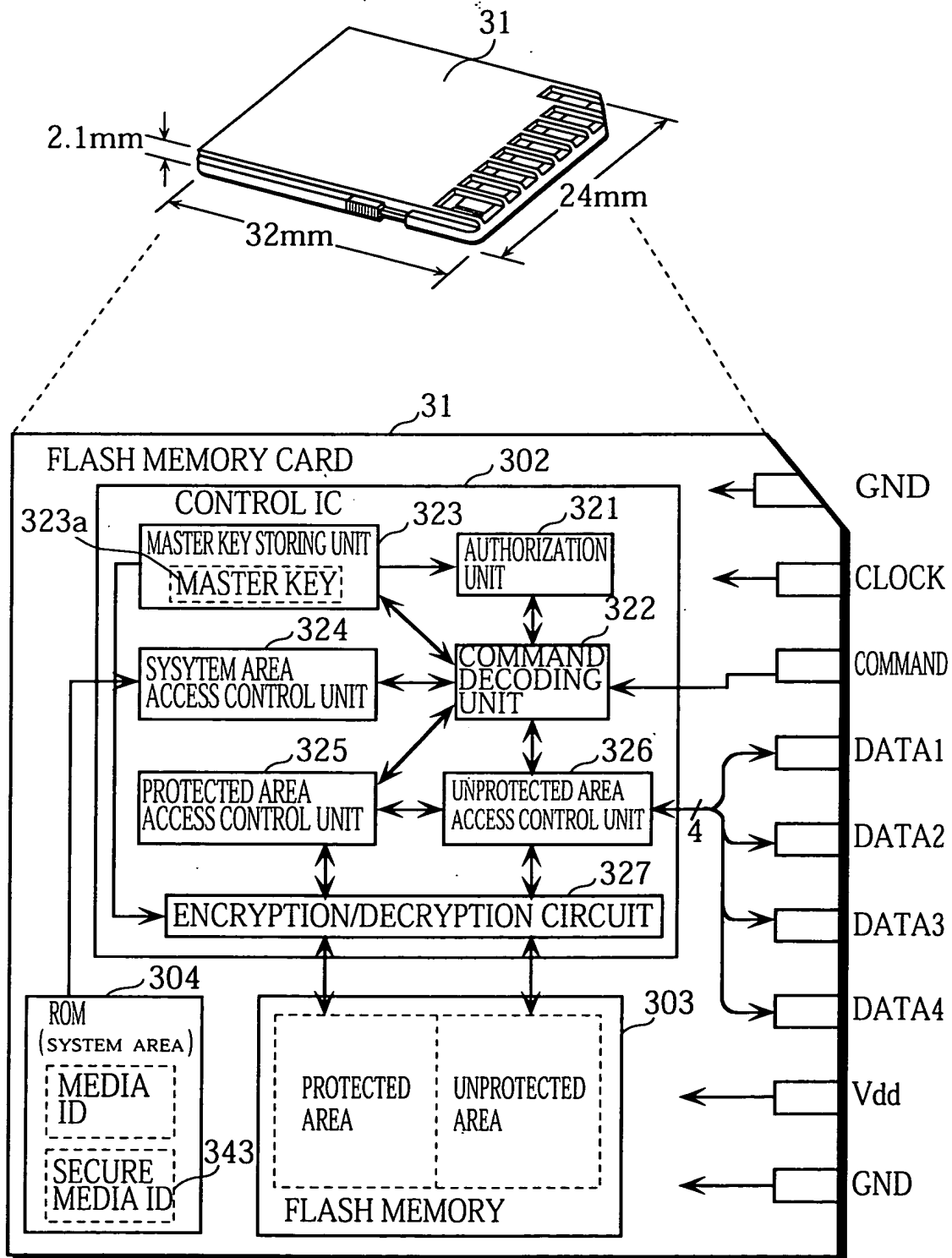


FIG. 70

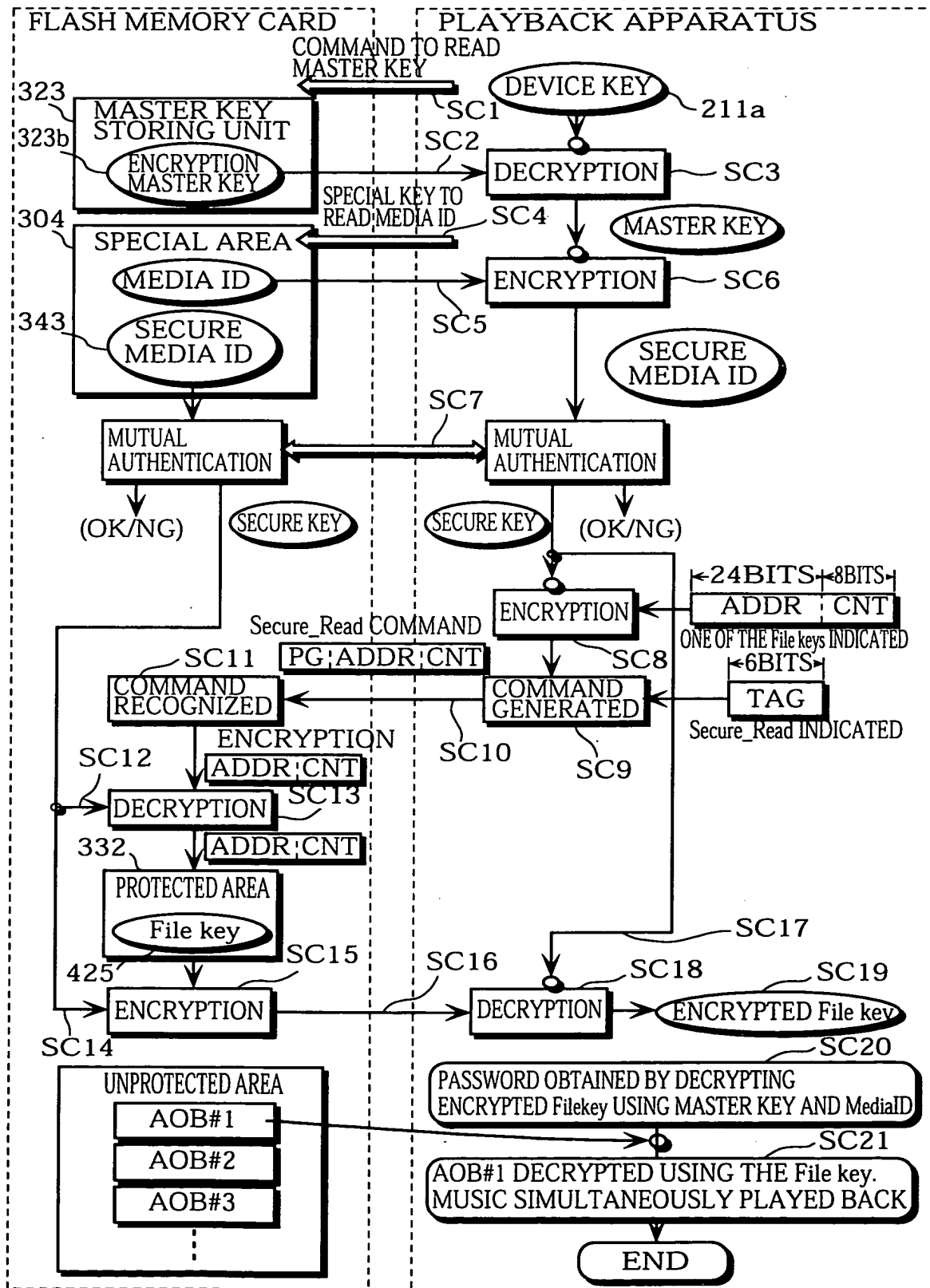


FIG. 71

